

# Consumers' Research BULLETIN

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# Consumers' Research BULLETIN

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## Off the Editor's Chest

**T**HAT PRICES ARE GOING UP is not news to consumers. The woman who does the family marketing knows that the prices of meat and fresh vegetables have risen so rapidly that her food budget is knocked into a cocked hat, and the problem of properly feeding her family is rendered ever more difficult. Clothing is advancing in price or being deliberately deteriorated in quality in order to maintain customary price levels. One journal of the clothing trade has discussed for some time the fact that after Easter, a comprehensive scheme of price rises will need to be put into effect and that it is important to do it as unobtrusively as possible in order not to stiffen consumer resistance.

An able writer on economic problems, John T. Flynn, points out that "Every financial paper, every bulletin which comes to me, every talk with business men, indicates that the process of price-raising is definitely on the march. Unfortunately there seems to be no such assertive public resistance to this as once there was. The reason is perhaps because propaganda for the last five years has about knocked the public cold on price resistance, at least in the mass."

There is no good reason why consumers should give credence to that fallacious argument which is confidently exploited as economic wisdom among government "experts," and even by occasional businessmen, that high prices are a sign of recovery and returning prosperity. Prosperity for whom? Not the average consumer, certainly, whose cost of living rises far faster than his salary or wage rise—if any. Because the consumer is comparatively unorganized he cannot wield strong and instantly applied political pressure in his own interest. There is as yet no Department of the Consumer in the federal government, no Secretary for Consumers in the Cabinet through whom his protest can be voiced. There is, in short, no one in the government service who cares a tinker's dam, except for political and vote-getting reasons, about consumers' welfare. When prices rise and are protested, the standard reaction of the politician is to explain to the people what a burst of prosperity it portends.

Fortunately, however, the consumer always has one effective weapon at his command which he can use without benefit of organization. He can and often will, because he has no choice, refuse to buy anything except those goods and services that he cannot do without. He may have money to buy a new electric refrigerator or a new radio, but if prices rise beyond all reason he will find a way to do without a refrigerator when the weather permits, and after that perhaps call in a good serviceman and make the old one do. If woolen clothing, suits, dresses, and coats are to be adulterated to the point where only a few qualified experts can tell whether low-grade wool or high-grade shoddy is the main constituent of the garment, women can buy good Scotch or English woollens in England, France, or Bermuda, and give their home-town tailors or dressmakers the job of making their wardrobes.

It's a bother, certainly. But it is a much wiser course to start making your plans now to circumvent price rises than it is to wait until they have shot sky high and you have no choice but to refrain from buying because you have no money left. There has been lots of tampering with the law of supply and demand, but there are times when the law functions in a way useful to the public generally. Sometimes when the law works, it is not a depression that is being experienced but merely a period in which normal and reasonable price levels are being restored, and wasteful and unhealthy practices in business, particularly in "distribution," are being liquidated.

Consumer resistance, when it becomes noticeable even in scattered areas, has the very wholesome effect of un-pegging prices and bringing them down to earth. Start asking your friends how their consumer resistance is today. If you have some money that is burning a hole in your pocket and must be spent, take a trip to Europe, to Mexico, to the Yellowstone, to Canada. It will probably be some time before travel bargains are as numerous as they are this year.

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Symbols used to indicate sources of data and bases of ratings:

A—recommended on basis of quality.

AA—regarded as worthy of highest recommendation.

B—Intermediate with respect to quality.

C—not recommended on basis of quality.

cr—information from Consumers' Research's own tests or investigations.

1, 2, 3—relative prices, 1 being low, 3 high.

36, 37—year in which test was made or information obtained by the staff of Consumers' Research.

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## Going to Europe Third Class?

ONE WONDERS WHY there should be a Third Class to begin with. As the passenger carrying trade on the Atlantic was originally in the hands of the English and as England is—or was—a land of class distinctions it follows that these distinctions should carry over into the sea. Ships were originally divided into first class, in which the "best people" traveled; second class, created for their personal servants, maids, valets, and governesses, and for members of the tradesman class; and third class or "steerage," for the Scotch, Irish, and German emigrants and for those hordes from Central Europe whose children, in another generation, were destined to become our own "best people."

These three classes were at one time necessary: servants must be kept from their "betters" while as between First and the "great unwashed" in Third there once existed a vast gulf which was not only social but hygienic and bacteriological as well. These three divisions are still with us while the reasons for them have largely disappeared. Such few emigrants as we now receive are mostly of the white-collar class. Second Class is now called Tourist (because the average American objects to the implications in the term second class) and First Class, for some strange reason, is called Cabin Class.

In the meantime a new kind of traveler has grown up in the United States, a group—for want of a better word—loosely called "students." "Students" are young people or those in middle life who are supposed to have more brains than money. We can assume that their funds are limited and that they see no reason for paying \$287 to cross the Atlantic in First Class when the same journey can be made in comfort by traveling Third and paying only \$99 ("Queen Mary" rates). Since the flood of emigrants ceased some years ago there has developed the keenest sort of competition to lure the American "students" into those cabins down by the water line and back over the propeller.

In the older ships built before the war, of which the "Berengaria" is typical, Third Class is still pretty well down the social scale, but when you see Third Class on the new "Queen Mary" you may wonder if it's worth the difference to be in First. Third on the "Queen Mary" is better than Second and fully as good as First on many ships which old travelers could name. It has good beds, good linen, hot and cold running water, dressing tables, mirrors, reading lamps, and ample wardrobes. The public rooms, with windows which look out forward, are surprisingly sumptuous and well designed. Most of these third-class cabins are in the forward part of the ship. For this reason many travel agents claim that Third on the "Queen Mary" is more desirable than Tourist, which is in the stern and gets the worst of the vibration in this ship.

The "Normandie," which is the next newest steamer, is said to have the next best Third Class on the Atlantic—nice cabins with good ventilation,

all sorts of gadgets and conveniences, and fine public rooms. Here most of the Third is located in the extreme stern and therefore gets more than its share of vibration. This slight disadvantage is offset by the fact that on the French Line no one seems obliged to remain in the class to which one is assigned. Tourist-class passengers seem to do most of their dancing in the Cabin Class while Cabin Class does a lot of visiting in the Tourist section, and those third-class passengers who pass out a little *baksheesh* soon have the run of the ship. We should point out that the best third-class cabins on both the "Queen Mary" and the "Normandie" are "convertible" and therefore become tourist class in the rush summer season.

Next we should list the "Bremen" and "Europa" both of which have excellent third-class accommodations, both located in the forward part of the ship. The German lines seem to have more planned, and better organized, entertainment for their passengers than the competing lines.

The "Washington" and "Manhattan" come next, followed by the "Britannic" and the "Georgic," then come the "Lafayette" and the "Champlain." The "Statendam" should be included in this list of recommended ships, and our story is about complete.

Both the "Pilsudsky" and the "Batory" of the Polish line have splendidly appointed cabins and public rooms in the third—even a fine gymnasium and tile swimming pool. As these two new ships carry only two classes, their Third would correspond to Tourist on some of the smaller ships.

The thing which so often makes Third Class unacceptable to American "students" is not so much the lack of conveniences as the lack of manners on the part of one's fellow travelers. If one is sensitive about long whiskers and strange eating habits, then one might be cautious about travelling Third on the Polish ships.

The Italian steamers fall under the same caution. Few American "students" will consider Third Class to Mediterranean ports because of the general, and more or less important, halo of garlic and other strange condiments which envelope one's fellow travelers.

Regarding food, one is sure of good food in the third class of almost any ship. It is easy to improve the food when competition makes it as necessary as it does today. Since it is next to impossible to change the cabins and interior arrangement once the ship is built, the new ships are the best travel buys. It's a good rule not to travel Third on a ship which is more than six or seven years old.

There is a vast difference between the third-class cabins on ships built before and immediately after the war and those built within the last six or seven years—the old ships have narrow cabins and narrow bunks, no running water, only the old-fashioned tip basins, no ventilators, no wardrobes, and usually only one electric light which, generally, is high upon the ceiling.



The newest ships have better beds, forced draft ventilation, hot and cold running water, wardrobes, several lights, including individual reading lamps. The newer the ship the better the accommodation and the more gadgets.

### *European Travel Costs for Summer of 1937*

Italy is now in the lead in the cheap travel field. All travel costs will be down as compared to 1936. The trip which averaged \$12 a day last summer should cost about \$10 a day this year. (This refers to the time you are ashore in Europe.) Steamship fares will be up probably five percent next summer due to actual increases in base fares and to re-pricing the better cabins on a higher schedule.

Italy will lead the cheap travel parade with 50 percent rail fare reductions to tourists and new

low hotel and sightseeing rates. For example, one can now stop in superior hotels such as the "Flora" in Rome, the "Savoy" in Florence, "Royal" in Naples, and the "Royal Danieli" in Venice for \$3 a day including room, breakfast and dinner, and including tips and taxes. Comfortable medium-grade travel in Italy will average about \$5 a day.

France will rate next with an average of about \$8 a day. England and the British Isles for the same services will cost about \$10 a day and up, and Switzerland around \$12 a day. Holland and Belgium will rate between England and Switzerland. Germany is not expensive if you stay long enough to get the 60 percent rail reduction and if you buy your train tickets in Germany, not outside the country, and take full advantage of the registered marks which may be purchased (as of February 1, 1937) at about 23 cents.

B. TRAVEL WISE

## Electric Flatirons

"WITH ALL YOU SAY [about the non-automatic electric flatiron being a dangerous device] I heartily agree," wrote an executive of one of the state fire prevention bureaus. "My experience in a house which we rented furnished some years ago corroborated very impressively the reports that from time to time come in from our electrical inspectors. Upon two occasions in making nightly inspection of the basement I found white hot irons in contact with combustible material. . . ." Alarmed by the first-hand knowledge which he had acquired through these two vivid experiences of the extreme danger of fires being set by non-automatic electric flatirons, this man arranged not only to have a large, red globe glow in the kitchen when the flatiron was connected to the electric circuit, but also to have a red pilot light wired in such a way as to give a similar warning on the second floor just outside his bedroom door.

Because of the ever-present danger of accidentally failing to disconnect an electric flatiron, and the fact that the thermostatically controlled irons are distinctly safer, CR recommends that only thermostatically controlled irons be used. Such flatirons maintain a temperature which fluctuates over a limited range and afford a greatly increased margin, and probability, of safety over the non-automatic type.

The ideal flatiron not only must be thermostatically controlled, but it must meet many other requirements if it is to perform as well as a flatiron should perform. Many women, particularly those who are not of muscular build, will likely judge as too heavy a flatiron weighing as much as six pounds and will prefer one weighing four or five pounds. The area of the soleplate should be 25 square inches or more in order that the labor and time required for ironing may be reduced to a minimum. A flatiron that is used for heavy and continuous work should be designed to consume approximately 1,000 watts of electrical energy, for the rate at which heat is supplied in a flatiron consuming only 660 watts is often not adequate to maintain the desired temperature for ironing sheets,

tablecloths, towels, and other heavy materials. Higher wattage rating does not increase the cost of operation, for the extra power supply required at any given moment is compensated for by the shorter periods during which the current has to flow. Besides these important general specifications, there are numerous detailed requirements of a more technical nature for safety, durability, effectiveness, and convenience, which a good flatiron must fulfill, as specified by the Appliance Committee of the Association of Edison Illuminating Companies.

For ironing in a small family, a good electric flatiron probably furnishes the most completely satisfactory and practical method and is preferable to a mangle or electric ironing machine.

CR has recently examined and tested nine brands of flatirons. Not only were the flatirons carefully inspected and tested in the laboratory for electrical shock hazard, uniformity of temperatures, accuracy of temperature control, speed of heating (except the *Cord-less-matic*), temperature of handle, etc., but they were also put into practical use by several women well practiced in the art of ironing. Electrical insulation was not found deficient in any of the flatirons; they were not, however, tested for quality of insulation under high humidity conditions. Connecting cords (cord sets) were not rated. All ratings are cr 37.

### A. Recommended

*Sunbeam Ironmaster*, Cat. No. A1 (Chicago Flexible Shaft Co., Roosevelt Rd., Chicago) \$6.70 (\$7.95 with clothes sprinkler). Thermostatically controlled. 1,000 watt, a-c only. 3 lb 12 oz in weight. Fastest-heating iron of the 8 brands tested for speed of heating. Gave good performance; and found very satisfactory by practical ironers. 2

### B. Intermediate

*Heatmaster*, Cat. No. 20—365 (Distrib. Sears, Roebuck & Co.) \$5.65 plus postage. Thermostatically controlled. 1,000 watt, a-c only. 4 lb 12 oz. Medium fast in speed of heating. 2

*Wards Supreme Quality*, Cat. No. 86—5098 (Distrib. Montgomery Ward & Co.) \$4.75 plus postage. Ther-



**B. Intermediate (contd.)**

mostatically controlled. a-c only. 3 lb 4 oz. Rated at 1,000 watts yet measured rate of energy consumption was only 880 watts. Medium fast in speed of heating. Did not quite measure up to recognized standard safety requirements for electrical insulation, but believed not to offer a serious hazard. 2

*Hotpoint Modern*, Mfr.'s Cat. No. 149F83 (General Electric Co., Bridgeport, Conn.; Cat. No. 86—5497, distrib. Montgomery Ward & Co.) \$8.95 plus postage. Thermostatically controlled. 1,000 watt. a-c only. 3 lb 11 oz (manufacturer claimed 3 lb 8 oz). Third fastest-heating iron of 8 brands tested for speed of heating. Metal of soleplate especially easily scratched. Found less satisfactory in use by practical ironers than the *Sunbeam*. 3

**C. Not Recommended**

*Kwikway* (Kwikway Products, Inc., St. Louis) \$1.95. Not thermostatically controlled. 660 watt. a-c or d-c. 5 lb 5 oz. Judged more satisfactory in use than *Victory*. Seventh fastest-heating iron of 8 brands tested for speed of heating; thus its name may be definitely misleading. Would not be convenient for heavy work. Did not quite measure up to standard safety requirements for electrical insulation, but believed not to offer a serious hazard. Approved by Underwriters' Laboratories. 1

*Victory*, Type AKU-B (Chicago Electric Mfg. Co., 2801 S. Halsted St., Chicago) \$1. Not thermostatically controlled. Without cord. 550 watt. a-c or d-c. 5 lb 6 oz. Soleplate area 22 sq in. (smaller than judged desirable). Slowest-heating iron of 8 brands tested for speed of heating. Would not be convenient for heavy work. Did not meet recognized standard safety requirements for electrical insulation (there was a "flashover" at 600 volts; but subsequently

**C. Not Recommended (contd.)**

satisfactory). Approved by Underwriters' Laboratories. 1

*Universal*, Cat. No. E7886 (Landers, Frary & Clark, New Britain, Conn.) \$6.75. Thermostatically controlled. 800 watt. a-c only. 5 lb 12 oz. Soleplate area 23 sq in. (smaller than judged desirable). At high settings of temperature control, handle became too hot for comfort. Sixth fastest-heating iron of 8 brands tested for speed of heating. Several practical ironers judged this iron too heavy for convenience. 2

*Adjust-o-matic*, Model LPC-4 (Westinghouse Electric & Mfg. Co., Mansfield, Ohio) \$8.95 less \$1 allowance for old iron. Thermostatically controlled. 1,000 watt. a-c only. 3 lb 13 oz. Second fastest-heating iron of 8 brands tested for speed of heating. At high settings of temperature control, handle became too hot for comfort. Did not meet recognized standard safety requirements for electrical insulation (there was a "flashover" at 750 volts; but subsequently satisfactory). 3

*Cord-less-matic* (Brannon, Inc., Detroit) \$8.95. Non-adjustable thermostat to prevent overheating. 1,320 watt. a-c only. 5 lb 14 oz. Iron is heated only while resting on a base to which the cord is attached, the iron itself being free of the cord when in use. The sales advantage of this iron is, of course, in its obvious convenience in not having a cord trailing behind the iron and getting into one's way. When the iron sits in certain positions on its base, as may occasionally occur in use, there is possible grave danger from all metallic parts becoming electrically charged by being directly connected with the power line. The iron was not tested for speed of heating. In the use test, all women participating agreed in finding action of this iron unsatisfactory. 3

## Electric Toasters

**A**UTOMATIC TOASTERS not only cost more to buy than non-automatic toasters, but they also cost more to operate—50 percent more on the average. They are, however, more often constructed so as to toast evenly than are the non-automatic ones.

For a consumer whose electricity bill for the use of a non-automatic toaster is \$2 for a year—the estimate of one power and light company, and a reasonable figure—the amount will probably run to \$3 when an automatic toaster is used.

CR's tests have shown that in general the toaster which does the job in the shortest time with the lowest operating cost gives less even toasting than the slower-operating appliance; moreover, it produces a different sort of toast. In selecting a toaster apart from the listings which follow, one will often have to choose between a high degree of uniformity in toasting or high speed and lower operating cost, for present-day toasters (with a few exceptions) do not combine all three characteristics. Nor, naturally, does the advertising of the toaster manufacturers give the slightest indication of the performance characteristics of one make as against another—distinctions which are the ones of primary importance to consumers.

There are obvious features of a satisfactory toaster which even a casual observer would not fail to notice when the matter was brought to his attention. Well-designed toasters, for example,

would not have their doors so arranged that when opened they come into contact with the table top so as to burn its finish, nor would their heating wires be so mounted that they can touch the metal frame of the toaster and charge it with electricity that could cause the death of the user or a child in his family. Yet both of these defects were found among popular brands of toasters. It is rather ludicrous, too, that one toaster, although intended to take two slices of bread at one time, was made just a shade too small to do this satisfactorily. The space allowed for one slice of bread should certainly be not less than  $4\frac{1}{2} \times 5 \times \frac{5}{8}$  inches.

With the best of luck a toaster will occasionally be dropped or struck by accident, and its construction should therefore be sturdy—far sturdier than that of many toasters on the market. The design of a toaster should permit easy—and cheap—replacement of the heating element in case it burns out—yet the manufacturer has usually preferred to make a toaster which is about as cheap to throw away as to try to repair, when the heating element breaks. In choosing between toasters, otherwise equally desirable, select the one with a heating element which glows with a dull red color as the one having probably longer working life, rather than one which glows brightly at a cherry red. While it is an obvious convenience that a toaster be equipped with a switch so that it can be turned

on and off while at the dining-room table, many toasters have no provision either by a switch or by a plug for shutting off the current at the toaster, and those with a plug will probably burn the fingers of the operator who tries to disconnect it after the toaster has been running for a time. In the absence of a convenient arrangement for turning the current on and off, the user will naturally let the current run longer than necessary, which adds to the monthly bill from the power company.

CR has examined and tested six automatic and seven non-automatic toasters. All those of the automatic type toasted both sides of two slices of bread at the same time. All those of the non-automatic type toasted one side at a time, of each of two slices of bread, and turned the toast by the flip-flop method, that is, as the door of the toaster opened, the bread slice was supposed to slide down on the door and to present its other side when the door closed. All non-automatic toasters operate on either alternating or direct current, but some of the automatic toasters are designed for use on alternating current only. The automatic timing of the toasting process was accomplished by means of a thermostat, a simple clockwork mechanism, or a thermostatically controlled clockwork. The latter method as used in the *Toastmaster* was judged to give somewhat closer regulation. Electric insulation was not found deficient in any of the toasters except as previously noted; they were not, however, tested for quality of insulation under high humidity conditions. Connecting cords (cord sets) were not rated. All ratings are cr 37.

## Non-Automatic Toasters

### A. Recommended

*Proctor Turn-O-Matic*, Cat. No. 1453 (Proctor & Schwartz Electric Co., Philadelphia) \$2.95. 110-120 volts. Doors were inter-connected so that when one door opens, the other opens also. Well made. Made toast relatively quickly and economically. The toasting was comparatively even. 2

### B. Intermediate

Montgomery Ward & Co., Cat. No. 86—5117 (Electrahot Mfg. Co., Mansfield, Ohio) \$1.37 plus postage. 110-120 volts. Made toast relatively quickly and economically. The toasting was uneven. Cord permanently attached; no means to shut off current at toaster. 1

*Manning-Bowman*, Cat. No. 78 (Manning, Bowman & Co., Meriden, Conn.) \$2.95. 110-120 volts. Well made. Medium speed of toasting. The toasting was uneven. 2

### C. Not Recommended

*Challenge*, Cat. No. 20 D 861 (The Made-Rite Corp., Cleveland; distrib. Sears, Roebuck & Co.) \$1.39 plus postage. 110 volts. When doors open they rest on the table and will scorch it when toaster is hot (the appliance was approved by Underwriters' Labs.). Relatively expensive to operate. Toasting somewhat uneven. Cord permanently attached; no means to shut off current at toaster. 1

*Moderne*, Cat. No. L-7 (Knapp-Monarch Co., St. Louis) \$1.98. 115 volts. When doors are open they rest on table and will scorch it when toaster is hot (the appliance was approved by Underwriters' Labs.). The toaster was not well made. Toasting was un-

### C. Not Recommended (contd.)

even. Cord permanently attached; no means to shut off current at toaster. Did not meet a recognized standard requirement for safety of electrical insulation (there was a "flashover" at 800 volts; but subsequently satisfactory). 1

*Sterling Handyhot* (Chicago Electric Mfg. Co., 6333 W. 65 St., Chicago) \$1. 110-120 volts. The toaster was not well made. Toasting was uneven. Cord permanently attached; no means to shut off current at toaster. 1

*Westinghouse Turnover*, TE-4 (Westinghouse Electric & Mfg. Co., Mansfield, Ohio) \$4.95. 115 volts. Plug terminals lacked customary (and obviously requisite) safeguard to prevent accidental contact with charged terminals when connecting plug to toaster (yet appliance was approved by Underwriters' Labs.). Inside painted with aluminum paint which flaked and rubbed off on toast. Made toast relatively slowly, and was expensive in operation. Toasting was uneven. 3

## Automatic Toasters

### A. Recommended

*Toastmaster*, Cat. No. 1B6 (McGraw Electric Co., Minneapolis) \$16. 115 volts. a-c only. Automatic feature consisted of a thermostatically controlled clockwork which shuts off the current. Toast is automatically raised to a position partly outside the toaster when ready. The appliance was well made, and its performance very good. 3

### B. Intermediate

*Heatmaster De Luxe*, Cat. No. 20 D 694 (Utility Electric Co., St. Louis; distrib. Sears, Roebuck & Co.) \$7.95 plus postage. 115 volts. a-c or d-c. Automatic feature consisted of simple clockwork which does not cut off current altogether but reduces it, causing a low heat that would give a dry or "Melba-type toast." Lacked switch which should be provided for sake of convenience and economical operation. Ticking of the clockwork mechanism was comparatively loud. Performance good. 1

*Manning-Bowman Automatic*, Cat. No. 108 (Manning, Bowman & Co., Meriden, Conn.) \$11.95. 110-125 volts. a-c or d-c. Automatic feature consisted of a simple clockwork which shuts off the current. Comparatively slow in operation. Performance good. 2

*Sunbeam*, Cat. No. T-1-C (Chicago Flexible Shaft Co., 5600 Roosevelt Rd., Chicago) \$10.95. 110-120 volts. a-c or d-c. Automatic feature consisted of a thermostat which shuts off the current. Equipped with glass signal lens to show when heater unit is operating. This toaster was relatively slow and expensive to operate. Performance good. 2

### C. Not Recommended

*Wards Supreme Quality*, Cat. No. 586—5259 (Distrib. Montgomery Ward & Co.) \$6.65 plus postage. 115 volts. a-c only. Automatic feature consisted of thermostat, which shuts off the current. Toast space intended to hold 2 slices of toast end to end is a shade too short for 2 ordinary slices. Plug terminals lacked customary (and obviously requisite) safeguard to prevent accidental contact with charged terminals when connecting plug but, according to catalogue, approved by Underwriters' Laboratories. The toasting was uneven. 1

*Proctor De Luxe*, Cat. No. 1435 (Proctor & Schwartz Electric Co., Philadelphia) \$14.50. 110-120 volts. a-c only. Automatic feature consisted of thermostat.

## C. Not Recommended (contd.)

which shuts off the current, and a bell which rings when toast is ready. Equipped with glass signal lens to show when heater unit is operating. Designed to give intermittent flow of current to keep toast warm until needed, but the toast soon became darker when allowed to remain in toaster. One heating element unsymmetrically placed giving uneven toasting. Heating wire bulged out when hot so as to touch toast-supporting frame, thus producing a grave shock hazard. This toaster was relatively expensive in operation. 3

## Electric Waffle Irons

SIX BRANDS OF WAFFLE IRONS have been tested recently by CR. Contrasting with the results often found in tests of electrical appliances, all six waffle irons in this test did fairly well the work for which they were intended, and the variation in estimated cost of operation was only a little above twenty percent. With one exception, the models tested disclosed no evidence of electrical hazard to the user other than lack of a guard sleeve at the plug connections. The waffle irons were all chromium plated. All were equipped with a temperature-indicating device useful as a guide in cooking the waffles, and four of the irons had, in addition, automatic temperature control. There was an "overflow groove" on three of the irons to prevent an excess of batter from spilling onto the table, a rather useful feature of design.

Electrical insulation was not found deficient in any of the waffle irons; they were not, however, tested for quality of insulation under high humidity conditions, as is generally done by CR for electrical appliances which are likely to be used more frequently and under conditions of use affording greater electrical hazards.

All the waffle irons with plug connections lacked safeguards as commonly provided on toasters, flat-irons, and other electrical appliances, obviously requisite to prevent accidental contact with electrically charged terminals when connecting the plug to the appliance. To avoid contact of the fingers with live terminals, users of the waffle irons must, therefore, use a little more care than would otherwise be necessary when connecting or disconnecting the plug. Connecting cords (cord sets) were not rated. All ratings are cr 37.

## A. Recommended

*Toastmaster Waffle Baker*, Cat. No. 2D1 (McGraw Electric Co., Minneapolis) \$12.50. 115 volts. a-c only. Automatic temperature control. Overflow groove provided. 3

## B. Intermediate

*Heatmaster*, Cat. No. 20—1188 (Distrib. Sears, Roebuck & Co.) \$4.45 plus postage. 110-120 volts. a-c only. Automatic temperature control. No overflow groove was provided. Plug terminals lacked customary (and obviously requisite) safeguard to prevent accidental contact with charged terminals when connecting plug to waffle iron. 1

*Wards Standard Quality*, Cat. No. 86—5139 (Electrahot Mfg. Co., Mansfield, Ohio; distrib. Montgomery Ward & Co.) \$4.45 plus postage. 110-120 volts. a-c only. Automatic temperature control. Lacked overflow groove. Did not meet a recognized

## B. Intermediate (contd.)

standard safety requirement for electrical insulation (there was an initial "flashover" in the cord plug at 500 volts; but subsequently satisfactory). Plug terminals lacked customary (and obviously requisite) safeguard to prevent accidental contact with charged terminals when connecting plug to waffle iron (but was approved by Underwriters' Laboratories). 1

*Manning-Bowman*, Cat. No. 1646 (Manning, Bowman & Co., Meriden, Conn.) \$5.95. 110-120 volts. a-c or d-c. Non-automatic. Overflow groove provided. Waffle baking uneven. Plug terminals lacked customary (and obviously requisite) safeguard to prevent accidental contact with charged terminals when connecting plug to waffle iron (but was approved by Underwriters' Laboratories). 2

*Proctor Heat Indicator Waffler*, Cat. No. 1520 (Proctor & Schwartz Electric Co., Philadelphia) \$6.95. 110-120 volts. a-c or d-c. Non-automatic. Overflow groove provided. Plug terminals lacked customary safeguard. 2

*Westinghouse*, Cat. No. WSA-14 (Westinghouse Electric & Mfg. Co., Mansfield, Ohio) \$9.95. 115 volts. a-c or d-c. Automatic temperature control. Lacked overflow groove. Plug terminals lacked customary safeguard (but was approved by Underwriters' Laboratories). 3

## Electric Two-Burner Table Stoves

THREE TABLE STOVES, ranging in price from \$6.45 to \$6.95 and bearing nameplates of General Electric, Sears, Roebuck, and Montgomery Ward, were tested by CR. Of these stoves of comparable price, only one was found to measure up to reasonable standards of performance, and that was not the one which carried the trade-mark of the great electric company that maintains the well-advertised "House of Magic." Consumers' Research has found in this case, as in many other instances, that a well-known and well-advertised trade-mark affords no guaranty of fine design and workmanship or even of good value for your money.

In the year 1932, the Appliance Committee of the Association of Edison Illuminating Companies drew up specifications for electric table stoves in two grades, one grade being called "superior grade" and the other "minimum acceptability grade." One of the several "minimum acceptable" requirements was that starting with a pint of cold water at 60 degrees Fahrenheit in a covered pan the stove should be able to bring the water to a boil within eighteen minutes. This time was three minutes longer than was to be required of a "superior" stove. With electricity at five cents per kilowatt-hour, the cost of heating the pint of water to boiling was one cent. Eighteen minutes are too long to wait for a pint of water to boil, but, if you depend for heating the water upon the General Electric ("House of Magic") Co.'s stove which CR tested, you will have to wait still longer, for the GE stove tested was found to require more than twenty minutes to bring a pint of water initially at 60 degrees Fahrenheit to the boiling point. It is important that these appliances should never be turned on and off at a pull switch or other switch suitable for turning on and off ordinary lamps of low wattage.



At five cents per kilowatt-hour for electrical energy, the Sears, Roebuck & Co.'s *Heatmaster* consumed a little more than one cent's worth of electricity to boil a pint of water initially at a temperature of 60 degrees Fahrenheit and on this score, as well as failure of one of the two heating units to accomplish this in eighteen minutes, did not qualify even as a stove of "minimum acceptability grade." This was the least efficient of the three brands tested.

The Montgomery Ward & Co.'s stove was considerably more practical and efficient. Not only was it much faster, but it was almost 50 percent more economical in use of electricity than the Sears, Roebuck & Co.'s *Heatmaster*.

Electrical insulation was not found deficient in any of the table stoves; they were not, however, tested for quality of insulation under high humidity conditions. Connecting cords (cord sets) were not rated. All ratings are cr 37.

#### A. Recommended

Montgomery Ward & Co., Cat. No. 486—5278. \$6.95 plus postage. 115 volts. Measured power of right-

#### A. Recommended (contd.)

and left-hand heating units or "burners," 600 watts and 905 watts respectively. Left-hand burner also had medium and low heats consuming 625 watts and 330 watts respectively. Metal-enclosed heating element. Most efficient of the 3 table stoves tested, and almost 50% more efficient than Sears' *Heatmaster*, the least efficient of the 3 stoves tested. 2

#### C. Not Recommended

*Hotpoint*, Cat. No. 111-D-50 (General Electric Co., Bridgeport, Conn.) \$6.90. 115 volts. Measured power of right- and left-hand units, 530 watts and 540 watts respectively. Open heating element of coiled wire in block of ceramic material. Heating elements considered too slow for most practical uses. 2

*Heatmaster*, Cat. No. 20—1691 (Distrib. Sears, Roebuck & Co.) \$6.45 plus postage. 115 volts. Measured power of right- and left-hand units, 960 watts and 660 watts respectively. Right-hand unit also had medium and low heats consuming 660 watts and 240 watts respectively. Metal-enclosed heating element finished in red enamel. Enamel quickly cracked off in use of the burner. Least efficient of the 3 stoves tested. 2

## Combination Electric Sandwich Toasters and Grills

THIS TYPE OF COMBINATION APPLIANCE is satisfactory for toasting sandwiches and for making waffles, and for grilling foods at the table, but is not desirable for use as an everyday bread toaster, because it costs much more to operate in this use than the usual type of toaster. The *Westinghouse* grill was the only one of the four tested by CR which was not equipped with grids suitable for use in baking waffles. In spite of this deficiency, it cost a dollar more than another grill in the test which did have waffle grids.

The appliances were tested for performance of the cooking operations for which they were primarily designed and were found satisfactory, but their general quality of construction, it was noted, too much resembled that characteristic of the chain-drug-store grade of electrical appliances. Variations in efficiency between brands, though such variations amounted to more than twenty percent, were not judged to be of particular significance since the total annual energy consumption of such appliances is not likely, in ordinary household use, to be great.

Electrical insulation was not found deficient in any of the sandwich toasters; they were not, however, tested for quality of insulation under high humidity conditions, as is generally done by CR for electrical appliances which are likely to be used more frequently and under conditions of use affording greater electrical hazards.

All the sandwich toasters lacked guard sleeves as commonly provided on toasters, flatirons, and other electrical appliances, obviously requisite to prevent accidental contact with electrically charged terminals when connecting the plug to the appliance. One manufacturer, the General Electric Co., went so far as to put on half a guard sleeve but did not finish the job of safeguarding this vital point. To avoid contact of the fingers with live terminals, users of the sandwich toasters must, therefore, use a little more care than would otherwise be necessary when connecting or disconnecting the plug. Connecting cords (cord sets) were not rated. All ratings are cr 37.

#### B. Intermediate

*Heatmaster*, Cat. No. 20—1886 (Distrib. Sears, Roebuck & Co.) \$3.45 plus postage. 110-120 volts. 1

Montgomery Ward & Co., Cat. No. 86—5132 (Dominion Electric Mfg. Co., Mansfield, Ohio) \$6.95 plus postage. 110-120 volts. The only appliance of this group equipped with heat indicator. 2

*Hotpoint*, Cat. No. 586—5484 (General Electric Co., Bridgeport, Conn.; distrib. Montgomery Ward & Co.) \$8.95 plus postage. 110 volts. 3

*Westinghouse*, Cat. No. STC-4 (Westinghouse Electric & Mfg. Co., Mansfield, Ohio) \$9.95. 115 volts. Not supplied with waffle grids. 3

"Consumer opposition to rising prices can take a most effective form through the spontaneous reaction of individuals. The power may lie not in organization but in aggregate action which, because of a similar stimulus similarly applied, results in homogeneous group reaction. Retail prices can be generally increased only at the expense of the number of purchases made, since total dollar purchasing power is relatively fixed at a given time. But since the number of purchases bears a general relation to the number of needs which must be filled, there is less elasticity than might be imagined in the number of articles which will be purchased." (From *Controlling Retailers*, by Ruth Prince Mack. New York: Columbia University Press.)

## Automobile Inner Tubes

**R**UBBER DETERIORATES RAPIDLY with age. Thus in purchasing inner tubes, every precaution should be taken to ensure that one is not receiving old stock. A simple method to guard against old stock is to remove the tube from the carton and spread it out; if it tends to hold the folds which it had in the package too sharply, it signifies that it has lost some of its resiliency and is old stock and should, therefore, be rejected. Fresh tubes will show little of the original fold characteristics. Likewise, tubes which show slight surface checking (marks like incipient cracks) when small areas are stretched as much as possible by hand or by inflating the tube slightly should also be rejected.

Tests have been carried out on sixteen brands of automobile inner tubes representing all of the prominent manufacturers in this field. The tests made were selected to permit the determination of the significant properties of the tube as purchased, the physical properties of the rubber, and the changes in these physical properties as samples cut from the tubes were subjected to aging in an oxygen bomb. The physical tests included determinations of (1) tensile strength, (2) elongation, (3) set (i.e., the increase in length of a one-inch section of tube stretched to six inches for a period of ten minutes, released and allowed to rest for ten minutes before measuring), (4) hardness, (5) elasticity. Determinations of tensile strength, elongation, and set were made in exact accordance with Federal Specification ZZ-R-601.

Inner tubes in normal service, are subject to the action of heat, compressed air, abrasion, and mechanical flexing; these being the principal destructive agents. The oxygen bomb aging test is one test used as a means of simulating in a short period of time the slow action of heat, and oxygen in the compressed air within the tube. No customary tests are available to predetermine effects of abrasion and mechanical work. The physical properties of small specimens, determined after definite intervals in the oxygen bomb give, however, some indication, it is believed, of the rubber's ability to resist destructive mechanical forces. The Bureau of Standards in its Circular 38 states in part that, "The accelerated aging of rubber compounds as an indication of their durability in actual service is an important consideration to the manufacturer and consumer. . . . The results obtained may be misleading when the conditions of vulcanization and composition of the compound are unknown."

It seems clear, from information available, that there is much room for argument about suitable methods for testing inner-tube rubber, and it is certain that no oxygen bomb or similar test alone can be used to make close distinctions between various makes of tubes. No one can possibly estimate accurately the service life of a particular piece of tube stock when its composition and cure are unknown and when, in addition, the antecedent history of the individual sample as to temperature, exposure to air and light, etc., and its age, is unknown. Considerable effort was therefore expended in de-

vising methods for rating the tubes which would be dependable in so far as these conditions permit.

The following ratings were therefore determined on the basis of, first, compliance with the requirements believed to determine the best tube stock and, second, compliance with dimensional limits set by the federal specifications. In turn, the best tube stock was judged to be that which, as received, had superior properties as to strength, elasticity, freedom from set, compressibility, and which best maintained these properties during the aging tests. All ratings are cr 37.

### A. Recommended

- Dunlop Grey* (Dunlop Tire & Rubber Corp., Buffalo, N. Y.) \$2.29. 2
- Fisk Ariel Heavy Duty* (Fisk Rubber Corp., Chicopee Falls, Mass.) \$2.25. 2
- Hood Red Arrow* (Hood Rubber Co., Inc., Watertown, Mass.) \$2.35. 2
- Overman Supermatic* (Overman Cushion Tire Co., Inc., Belleville, N. J.) \$2.50. 2
- General Heavy Duty, Molded* (General Tire & Rubber Co., Akron, Ohio) \$2.70. Slightly less desirable than the *Goodyear Heavy Duty* due to higher set, lower elongation, and change of hardness during aging test. 3
- Goodyear Heavy Duty* (Goodyear Tire & Rubber Co., Inc., Akron, Ohio) \$2.90. All properties of this tube remained virtually the same after aging, except the set, which was improved. Tensile strength and elongation were well above average. 3

### B. Intermediate

The performance of each of the four following tubes was marred by some significant deviation from preferred characteristics.

- Kelly-Springfield Heavy Duty* (Kelly-Springfield Tire Co., 1775 B'way, N. Y. C.) \$2.40. 2
- Yale* (Yale Rubber Co., Inc., Akron, Ohio) \$2.40. 2
- Goodrich Silvertown Gold & Black* (B. F. Goodrich Co., Akron, Ohio) \$2.90. 3
- Lee Bevel Weld* (Lee Tire & Rubber Co., Conshohocken, Pa.) \$2.90. 3

### C. Not Recommended

- Armstrong Senior* (Armstrong Rubber Co., Inc., West Haven, Conn.) \$2.35. Set high (an undesirable elongation, and change of hardness during aging. 2
- Firestone Standard Oldfield* (Firestone Tire & Rubber Co.) \$2.35. Poor performance after aging, especially as to sharp falling off of tensile strength. 2
- Goodyear Pathfinder* (Goodyear Tire & Rubber Co., Inc.) \$2.35. Low tensile strength. Loss of elasticity and hardness, high. 2
- Seiberling* (Seiberling Rubber Co., Akron, Ohio) \$2.35. Low tensile strength. Set exceptionally high (undesirable). 2
- U. S. Peerless* (U. S. Rubber Co.) \$2.35. Loss of elasticity high. Set exceptionally high (undesirable). 2
- U. S. Royal* (U. S. Rubber Co.) \$2.90. Low tensile strength. Set high (undesirable). 3

## Gardening

### IV

#### Arboriculture Expert Services

**L**OCAL FARM BUREAU AGENTS, your State Experiment Stations, and State Agricultural Colleges offer the best advisory services obtainable at the lowest cost. Consult them in regard to your problems. It has been estimated that an experiment station in one of the large eastern states costs the people of that state a little less than three cents per capita annually. You will find that you can get your money's worth many times over in expert advice from these sources.

Few home owners can afford the services of a professional landscape architect to assist in their problems of design. Frequently nurseries from which purchases have been made will offer free-of-charge a landscape service helpful not only for design but also for the selection of proper types of plants for particular localities. Likewise, few people can afford the tree expert's "scientific planned program for trees" (too often designed to benefit business first), but every tree owner should know what he can do himself and what must be, or is far better, done by the expert.

#### Fertilizing Shade Trees

Any recommendations of fertilizing methods for shade trees must of necessity be based largely upon opinion and on analogous work with orchard trees, as research is just beginning in this field (see *American Nurseryman* for October 1, and October 15, 1936). Starvation, including effects of drought, is the most common cause of death. In watering a tree, there seems to be little advantage in spiking the soil deeply with a fork, since but little water runs into the holes. Water penetrates the soil when the upper regions are saturated. For round-headed trees, not only should the ground continue to be soaked for a long time beneath the tree but the thorough soaking should extend also in a wide band around and beyond the outside "drip" of the leaves. For spire-shaped trees, wetting close to the trunk may be omitted and confined only to a wide band, the inner boundary of which is about half the height of the tree in distance away from the tree trunk. Soils with a water-holding capacity of 35 percent (not unusual) require approximately three gallons per square foot of surface to saturate the surface foot of soil, if dry. ¶ Trees that need fertilizer are those with dead limbs or twigs, those to be pruned or treated for disease or injury, or those growing too slowly as shown by short terminal growth (less than four inches for maples or elms). Fertilizers spaded into the soil may bring roots to the surface for food. This does not mean that roots from other areas will be drawn to the top, but only that new roots will tend to grow upward. It is not fully established that this is necessarily harmful. One expert believes that if the roots actually

obtain needed plant food near the surface, the root system as a whole should be benefitted thereby. Obviously, this method would not be desirable for trees whose roots had been drawn surfaceward previously, since they would be subject to injury during the process of spading in the fertilizer. A fairly good method of supplying artificial food to trees is to make crowbar holes one and a half to two feet deep, one to two feet apart, in a wide band around the tree as described above. Into each hole place a high-nitrogen complete fertilizer, then water, and finally fill with soil. The total amount of fertilizer to be used is recommended as one-half pound for each inch of trunk circumference at a point three feet above ground. Some tree surgery firms use another method for injecting fertilizer: Holes are drilled and fertilizer is forced through the soil under high air pressure. This procedure may possibly be valuable for breaking up hard subsoils as well as supplying fertilizer to the soil.

One expert takes exception to some of the previous statements on fertilizing trees and comments as follows:

"Nitrogen is the element which is most effective in tree fertilization and in view of the fact that available nitrogen is carried downward in soil by water very readily, I can see no reason for digging this fertilizer into the ground at all. Experience in orchard fertilization with inorganic nitrogen fertilizers will bear out this point of view. If phosphorus and potassium also are added, however, it would probably be advantageous to work them into the soil to a depth of three or four inches.

The evidence on the value of air-pressure fertilization is so meager and unreliable, and the indirect evidence of all we know about the physiology of plants from experiments on other plants is so strongly against it, that this method should be recommended with unusual reservations, if at all. My opinion is that, if a tree survives such treatment, it is strong evidence that nature is indeed marvelous. I'm afraid that the chief virtue of the method is that you have to hire a tree surgery firm to do it."

Experiments at Columbus, Ohio, show that "complete fertilizer high in nitrogen and ammonium sulphate plus superphosphate, appear to have been the most beneficial" of several types tried.

#### Spraying

*Serious insect attack* weakens a tree, and defoliation for three successive years kills it. State Experiment Stations can often recommend a man who will do small spraying jobs at a low price. The Park Boards in many cities and towns can offer expert advice, and in many cases will do the necessary spraying. Tree surgery firms may be expensive for small jobs unless neighbors cooperate to offer several jobs close together. Be sure the work is done at the best time for *control*, not when the company needs work for a slack period. This is especially



important when the spraying is to be done on fruit trees. Consult your State Experiment Station as to when these should be sprayed to insure the most desirable, and at the same time, safe fruit.

### Prevention of Injuries

*All mechanical injury* to trees should be avoided. A hard blow dealt by an automobile kills the cambium even when the bark is not broken. (The cambium is the layer of growing tissue between bark and wood.) Wires, chains, or clotheslines drawn tightly around a tree will strangle it, often in less than a year. Climbing spurs should never be used on live trees that are to be preserved.

*Pruning and bracing* may prevent serious injury. These measures often require expert judgment and for valuable trees are best left to a good tree surgery firm.

### Pruning

Branches growing fast at the expense of the rest of the tree should be cut back. When two branches rub, one must be removed. For certain weakened trees, e.g., rock maples whose central branches tend to die at the top, some of the lateral branches should be cut out, one or two at a time over a period of years, before the center is dead. It is better to shorten a long, structurally weak branch than let it break in a storm. V-crotches with a swelling below; three or four limbs from the same crotch; long, wide-spreading branches heavily weighted with foliage at the end; and limbs which behave differently from the rest of a tree in strong winds—all indicate weakness.

When transplanting young trees (also shrubs), it is well to prune back some of the upper branches. Since it takes some time for roots to establish themselves in a new position, the supply of water they can absorb from the soil and pass up to the foliage is naturally limited. By cutting back the upper branches of such a plant, the roots have less leaf surface to feed, with the result that the young plant "takes hold" in its new situation much more quickly than if left unpruned. This is not so necessary when the transplanting is done during the dormant stage of the plant.

### Bracing

Bracing (tying or supporting limbs with cables, rods, wire, etc.) structurally weak trees should be resorted to only when pruning will not solve the problem. There are good and poor methods of cabling. For valuable trees call in an expert. Coarsely threaded one-quarter inch to three-quarter inch screw-eyes with small "eyes" are better than bolts, because only one wound is made. If a bolt or screw-eye is too thick, the limb may break at that point. Cables should be over half the distance out from a crotch. (See *Cornell Extension Bulletin 312*; reference at end of this section.)

### Treatment of Injuries

#### Tree Paints

Do not underestimate the seriousness of wounds one inch or even one-half inch across, particularly on choice trees or shrubs. Every cut should be promptly shellacked, disinfected, and waterproofed,

and the work must be followed up from year to year and defects repaired promptly. It is advisable to cover a large wound with additional waterproofing each year.

#### A. Recommended

*Orange Shellac.* Apply a good coat within 3 or 4 min (at most) of making any cut, to the cut edge of bark, the cambium, and outer sapwood, to prevent the drying and death of the cambium. Not sufficiently permanent for large wounds. For larger wounds, cover the shellac with spar varnish or paint.

*Bordeaux Paint.* When infection may be already in the wood, use *Bordeaux* powder (poison) mixed with raw linseed oil to the consistency of thick paint, where creosote is injurious.

*Creosote and melted asphalt* in equal proportions by weight. Use when infection may be already in the wood. *Creosote*, inflammable, dangerous caustic, (caution). Not suitable for cherries, peaches, plums, magnolias, and tulip trees.

#### B. Intermediate

*A.C.E. Asphalt Chromate Emulsion* (E. I. du Pont de Nemours & Co., Inc., Paint & Varnish Div., Philadelphia) \$1.25 per gal. Waterproof dressing applied cold over the entire shellacked surface. Apply with a swab.

*Black Valdura Improved Asphalt Paint* (American Asphalt Paint Co., Chicago) 80c per qt, \$1.75 per gal. Used like *A.C.E.* Durable. Must be cut with linseed oil in cold weather.

### Tree Repair and Cavity Work

Every broken limb or other kind of wound offers entrance to insects and rot-producing fungi and should be attended to promptly. (See *Farmers' Bulletin 1726* and *Cornell Extension Bulletin 312* for methods; references at end of this section.) Treatment of long-neglected wounds requiring the removal of all decayed wood, often results in leaving a cavity. Filling a cavity does *not* strengthen the tree. Shallow cavities are always better without filling, and deep cavities are much safer left unfilled after treatment than filled with concrete, whether solid or in sections. Both filled and unfilled cavities must be watched for defects.

Concerning tree wounds and cavities, one expert advocating simple methods comments as follows:

"The practice of orchardists on wounds and cavities in trees is probably as good as any. They do their pruning in winter, when insects and fungi are inactive. The wounds dry somewhat on the surface, and no further attention is paid them unless they are quite large, in which case a little asphaltum paint may be used, but usually is not. Branches with cavities which are so extensive as to endanger the branch are sawed off; if such a cavity occurs in a trunk, the tree is allowed to go until it blows over, and a new one is planted."

#### A. Recommended

*Wood Fillings*, in long strips. (See *Farmers' Bull. 1726*; reference at end of this section.) Best method. Has a public-service patent and may be used by anyone. Requires more skill than do other types. 3

#### B. Intermediate

*Nuwend* (F. A. Bartlett Tree Expert Co., Stamford, Conn.) The best plastic filling. Patented, and used only by the Bartlett Co. 3

### C. Not Recommended

*Concrete Fillings*, solid or in sections. Rigid, never make a watertight joint with the wood, which rots behind the filling. Tubes put in to drain concrete-filled cavities become full of fungus spores and insects.

## Moving of Trees

Small trees are more easily transplanted than large ones, and the probability of their successful growth is greater. Furthermore, the small ones will overtake the larger ones within a few years. To move large trees, employ a firm with established reputation for such work. The risk of moving a big tree is measured by the cost of a guaranty (from 10 percent for elms to 50 percent for white oaks). A 25-foot elm may cost \$85, with guaranty. Have the tree-mover select the tree, because this requires expert judgment. The new location should be very favorable, the tree pit large, and well prepared with good soil. Always get a two-year guaranty, the contractor to watch for borers (almost sure to appear), and the client to water the tree. Few amateurs know how, or how much, to water. Ask the contractor for definite directions, and keep in touch with him. The tree must be watched for five years; normal terminal growth and full-sized leaves indicate recovery.

## How to Choose a Tree Expert

In states where tree surgeons are licensed, e.g., New Jersey, Connecticut, Rhode Island, Maine, New Hampshire, Ohio, and (soon) Massachusetts, always ask to see the license. The American Society of Arborists (517 Peoples Bank Bldg., White Plains, N. Y.) is, on the whole, a good group; choose small, rather than very widely extended, companies. A few ratings are given for general

reliability, with the reservation that the best tree experts, like the best doctors, may make mistakes and that the worst have some satisfied clients.

One qualified consultant adds: "Never hire a tree expert unless you are sure you know what should be done and how it should be done, and unless you can stick around and boss the job."

### A. Recommended

H. L. Frost & Higgins, Mill St., Arlington, Mass. Very expert with wood fillings.

E. H. Maeder, 75 Westminster St., Providence, R.I. Sometimes uses wood fillings.

Charles F. Irish, 418 E. 105 St., Cleveland. Mr. Irish himself is an expert diagnostician. Great reputation for tree moving, but does use concrete fillings.

F. A. Bartlett Tree Expert Co., Stamford, Conn. Good company, but not preeminent in spite of their scientific claims. "Lifetime tree surgery" is mere advertising. Plastic fillings. (See *Treatment of Injuries*.)

### C. Not Recommended

Davey Tree Expert Co., Kent, Ohio. Highly commercialized operations. Uses concrete fillings, already discussed; trees to which this method had been applied a few years ago by Davey on the Capitol grounds in Washington, D.C., are already in bad condition.

## References

*Treatment and Care of Tree Wounds*, *Farmers' Bulletin 1726*. Washington: U.S. Dept. of Agric. New. Excellent detailed directions for methods of tree surgery.

*Tree Bracing and Wound Treatment in the Orchard*, *Cornell Ext. Bulletin 312*. Ithaca: N.Y. State College of Agriculture, 1935. (See also references concerning trees given under report on *Insecticides and Fungicides*.)

## Tools and Equipment

V

THE GARDEN-TOOL STOCK in many hardware, seed, and department stores may not be suited to local needs since such stores often carry only a limited supply of implements suggested by the salesmen, perhaps more for salability than for practicability. A salesman's testimony as to the popularity of certain "best sellers" is an unreliable guide. There are many slightly different styles of tools, most of them being too heavy; buy the *lightest, smallest tool that is strong enough to do the work*.

A hoe, a spade, and a rake are the three most essential and useful tools for the backyard gardener. Gardeners have divers opinions on what additional tools or types of tools are most convenient and easiest to use. Many prefer the heart-shaped (Warren) hoe as a good all-round cultivator and weeder that is easy to handle. Some prefer a spading fork to any type of shovel for spading in dirt which is not too closely packed. Some find a simple hand cultivator more satisfactory for cultivation between rows of plants; but apparently there are as many who dislike the man-pushed wheel cultivator and seeder as there are those who find it a convenience. The effort required to push this

implement in anything but a well-prepared and mellow soil is so great that some home-gardeners find they must have a helper to pull with a cord while they push on the handles. The wheel cultivator with a large diameter wheel, say two feet, will push easier, other things being equal, than will a cultivator with a smaller wheel.

One important thing to look for in a tool is the method of attaching the handle to the blade, the working part of the tool. The weakest and a very common and cheap way is to drive the shank or tang into the end of the handle; this is usually protected from splitting by a ferrule. This construction will probably afford poor service and a short life, particularly if the tang is held only by friction and has no pin or rivet passing through it and the handle. Rake handles are usually of this sort, with or without the fastening pin or nail. A better type of construction common for shovels and the more expensive hoes is to fasten the handle into a socket which is forged integral with the blade. Handles made from improperly seasoned wood will shrink and, even in an implement

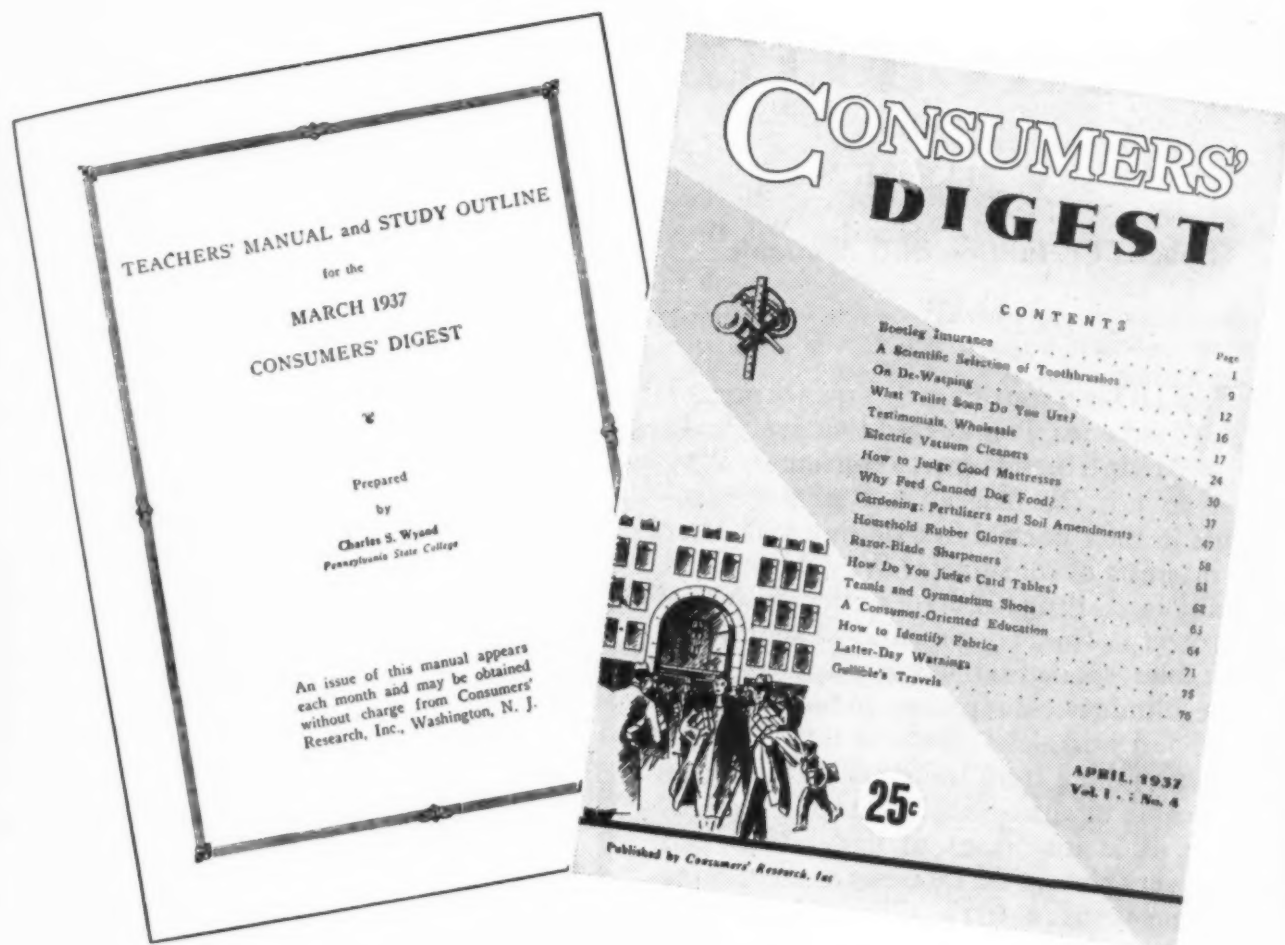
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# Guinea Pigs No More

by J. B. MATTHEWS

Special CR Edition Still Available

\$1.00

**W**HO is a consumer? You are one. I am one. It is alleged that everybody is, in a broad sense, a consumer. Why then do not the federal and state governments in their normal functioning look after the interests of consumers? Why do we need special food, drug, and cosmetic legislation to protect us from poison-sprayed apples and vegetables, spoiled salmon, eyelash dyes that cause blindness, dangerous reducing medicines, and worthless nostrums that claim to cure everything from indigestion to cancer? To be able to answer these questions intelligently, it is important to understand and define very clearly the interests and concerns of people as consumers as differentiated from their other roles in society as producer or worker. This Mr. Matthews has done in his chapter, "Who Are Consumers?"

After defining consumers and discussing the ways in which they are gypped, the author presents a series of suggestions for effective tactics by which consumers can secure products adequately labeled and priced in relation to their production cost and protection against misleading sales tactics and advertising.

The chapter, "Consumers Can Win," describes in detail a very elaborate exhibit, put on by the pupils of a California High School a few years ago, which illustrated the costliness of brand names, presented a comparison of the various types of cleaning agents, showed how to compound at home cosmetics and simple toilet preparations such as tooth powder and hand lotions, and a number of other topics. Teachers working in the field of consumers' problems will find *Guinea Pigs No More* very helpful in orienting their courses and integrating the different parts of their program.

## Consumer Gyps

Gyp—1: *Palpably Misleading Advertising.*

It is sometimes alleged by the representatives of business that only small and obscure advertisers who are really on the fringe of the business world are guilty of gross misstatements in advertisements. The facts do not substantiate such a defense.

Here's the way in which the Philco Radio and Television Corporation advertised one of its radios in *Liberty Magazine*:

"Explore the world with this new Philco 45C \$49.94. Here is a radio that will give you real adventure! Just turn its dial and you're on your way to far-away lands and strange, little-known places. What delightful times you'll have exploring the world! This compact, table-type Philco is packed full of power—power that reaches out thousands of miles to bring you the entertainment of the world. Properly installed with a Philco all-wave aerial, it will give you thrilling American and foreign reception."

A purchaser, who believed this Philco blurb and bought one of these instruments, wrote to the manufacturer complaining of poor performance far below the level indicated in the ad. To his complaint the Philco Radio and Television Corporation made the following reply:

"For your information the Philco No. 45 Chassis has a tuning range of 540 to 1720 kilocycles and 4.2 to 12 megacycles—two tuning bands. This affords a limited amount of short-wave and foreign reception in addition to the regular American broadcasts. . . .

"The Philco No. 16 Chassis will afford the wider range which you mention. . . .

"In the event that you desire to enjoy the wonderful reception afforded by the No. 16 models, we suggest that you negotiate with your dealer with the object of exchanging your No. 45 for this other model. . . ."

That is to say, when challenged to make good on the plain promises of its advertisement the Philco Company lowered the temperature and pressure of its vocabulary by many degrees, reaching the cool assertion that the *Philco* No. 45 "affords a limited amount of . . . foreign reception. . . ." Given any reasonable standards in the meaning of words, the advertisement about a *Philco* "packed full of power—power that reaches out thousands of miles to bring you the entertainment of the world" was palpably misleading. *Philco* is, of course, one of the most important concerns in the whole field of radio. It is not, however, unique among important concerns in its use of the techniques of misleading advertising.

*Guinea Pigs No More*, pp. 78-80

*Guinea Pigs No More*, in addition to "Palpably Misleading Advertising," discusses 74 other Consumer Gyps which in one way or another defraud the consumer. Teachers and students of advertising will find in this section of the book valuable case material for their studies.

(See page 12c for application blank)



# Eat, Drink and Be Wary

by F. J. SCHLINK

Special CR edition \$1.00

## [Quotations from *Eat, Drink and Be Wary*]

*"The latest researches by a dentist, not a rat-and-guinea-pig nutrition laboratorian, shows of a certainty that excessive use of orange and lemon juice causes destruction of teeth by decalcification."*

*"The indigestibility of milk, from which many persons suffer for years before they clearly isolate the cause, extends so far at times that even the amount of milk or cream drunk in a cup of coffee or cocoa will cause serious distress."*

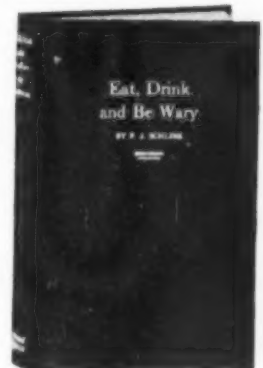
*"Fats used and reheated over a long period as they often are in restaurants contain harmful constituents almost certain to make their contribution to digestive troubles."*

*"The most important factor in the prevention of colds is unquestionably the diet, which determines the state of hydration, or water storage, in the tissues of the body."*

**W**HO decides what you eat? If you are making your selection of food on the basis of information appearing in women's magazines, newspaper columns, and over the radio, perhaps you had better not read this book. It would only make you unhappy. The author effectively reveals the concealed propaganda and pseudo science by which the canned food, milk, white bread, and breakfast food companies attempt to control our diet. He also points out the grave disadvantages of these controls to our pocketbook and health.

The book discusses the factory-originated trend, now well-nigh universal, toward refined, demineralized, and devitaminized foods. This trend has been followed by ridiculous and futile, but profitable, attempts to restore the old balance of nutritive elements that characterizes natural, unadulterated, honestly prepared foods, by putting over excessive roughage, and vitamin D bread, also factory-made cod-liver oil, raw vegetables (the home economists' special contribution), and other diet quackeries. Diet fads indulged in by the poor and ignorant, and by the well-to-do and educated classes alike, are discussed. The wide propagandizing of milk as a "health food" is shown to be a triumph of big-business enterprise and subsidized science rather than a genuine discovery of unbiased, disinterested nutritional scientists.

A constructive summing-up is given of what really is known about food science, by experts who aren't hired to have particular views in favor of bran or oranges or viosterol or vitamin D milk. The author shows how and what to eat in order to avoid, as well as one can, adulterated, over-refined, and downright dangerous foods and beverages. The content of the book is based upon a great mass of solid scientific and technical information, but is written so that any reader can understand all the points discussed. Though the material is mainly from Consumers' Research files, very little of it has appeared hitherto in Consumers' Research *Bulletins*, or in any other book or pamphlet.



## CONVENIENT ORDER BLANK

Consumers' Research, Inc.  
Washington, N. J.

- ☐ Guinea Pigs No More  
☐ Eat, Drink and Be Wary

Gentlemen:

Enclosed please find \$.....in check or money order for which send me, fully prepaid, one copy of the special CR edition of the books checked. I am a subscriber to Consumers' Research.

Name..... Street.....

City..... State.....

# Which



## Should You Buy ???

**C**ONSUMERS' RESEARCH *Bulletin* for February, 1937, provides concrete, specific information to help CR subscribers make an intelligent choice of a new 1937 car. Will it be a *Ford V-8*, "60," or a *V-8*, "85," a *Plymouth*, or a *Chevrolet* in the low-price group? Perhaps you are interested in a *Lincoln Zephyr*, a *Packard*. Some 48 different makes and models are rated by brand name in CR's *Automobile Bulletin* as *A*, *B*, or *C*.

As with all Consumers' Research reports, the data on which the listings are based come from well-qualified engineers who have no connections whatever with the companies whose products are reported on. CR does not secure its information on which ratings of products are based from manufacturers, salesmen, advertising men, or other commercially interested parties. No one can buy a recommendation for a product. Test results are not discussed with manufacturers, salesmen, or others interested before they appear in *Consumers' Research Bulletins*.

**T**RAILERS, the new mode of travel that is sweeping the country, are reported on in *Consumers' Research Bulletin* for March, 1937. This report not only discusses in general the various kinds of equipment which a good trailer should have but, in addition, rates 35 different makes or models of trailers by brand name as *A*, *B*, or *C* in five different groups. The prospective purchaser may save himself and his family numerous headaches, as well as time and money, by reading this article before making the contemplated purchase.

Neither the *Automobile Bulletin* nor the *March Bulletin*, which contains the report on trailers, can be purchased separately. They are available only to subscribers to *Consumers' Research Bulletins*, for which the yearly subscription rate is \$3. *Bulletins* are issued monthly except during July and August. To accommodate new subscribers, however, subscriptions may be dated back to begin with the February or the March issue. Simply check below the month with which you wish your subscription to commence.

CONSUMERS' RESEARCH, Inc.  
Washington, N. J.

I am enclosing \$3.00 (foreign \$3.50) for one year's subscription to the *Consumers' Research Bulletin* (which includes Annual Cumulative Bulletin number, Monthly Bulletin numbers—except during July and August). It is understood that my handling of any CR material which is marked "The analyses of commodities, products, or merchandise appearing in this issue are for the sole information of subscribers" will be in accordance with that direction.

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Begin subscription with (Check one) \_\_\_\_\_  
Feb. ☐ March ☐ April ☐ May ☐

CRA







of otherwise correct construction, will work loose and give unsatisfactory service. Cheap tools, and some not so cheap, have handles made of dead, and thus weak, wood, which cannot be detected until the handle breaks off short under very moderate strain. It is usually advisable to have the handle of a hoe, measured from the blade, four and one-half feet or more in length, and that of a rake about a foot longer. The blade itself should be made of steel, and be not too brittle (so that it might crack) but hard enough to resist excessive wear or bending. A crude test which the buyer himself can make is to strike the tool against a concrete floor or other hard object. If a tool is correctly tempered it will often have a clear ring or note when struck; but not all tools with such a ring are correctly tempered, and the test is therefore not a sure one but only one of several indications. In the better-made tools, the blade and the tang, or shank by which it is fastened to the handle, are made together as one piece of metal, but in the poorer grade of tools, the blade and tang may be made of separate pieces of metal riveted together. In some tools, such as two-prong weeding hoes, where there may be only a single rivet holding the blade and tang together, it is almost certain that the blade will eventually work loose, and the very best riveted connections at points of severe strain are likely in time to prove a source of weakness. A polished hoe or spade will slide through the soil more easily than a rough, unpolished one and should be chosen by the gardener who is prepared to take good care of his tools and put them away clean and dry every time he uses them.

Remember that inexpensive garden tools are often poor in quality. A good tool costs little more than a poor one and the extra money is well spent, for a good tool lasts so much longer, does better work, and when its initial cost is spread over the years of its service, the annual cost of the tool may be found far less than that of the cheaper tool. A golf-course supply house is generally a good place to buy first quality, durable, lawn equipment, including shovels, rakes, etc., often at low prices.

**Care of Tools.** The usability and life of a garden tool is greatly influenced by the care taken of it. Tools should be kept in dry, airy places to avoid rusting from moisture. A garage or dry tool house is much better for storage than a cellar, which is apt to be damp. Tools should be kept clean; fresh earth is much easier to remove than a layer of hard, caked dirt. The lawn mower should be cleaned by brushing after each mowing. It should be oiled frequently with a light oil; never try to sharpen it with a file. When storing it for the winter, hang it up, or place it on wooden blocks, so reversed that the bed knife is above. Before putting other tools away for the winter, a general overhauling is desirable. Hoes, spades, shovels, sickles, etc., should be sharpened. The metal parts of all tools will benefit from an oiling with old (or new) crankcase oil. Repairs may be made at this time advantageously. The prudent gardener will not only allot a special space for each implement but also see to it that tools are always returned to their respective places, thus keeping an orderly and readily accessible tool house.

Prices of garden tools are subject to change and are tending sharply upward.

#### A. Recommended

A. M. Leonard & Son, Piqua, Ohio, sell a selected list of tools which includes a great many of those recommended in the following listings.

*Oliver Ames Shovel*, No. 2 (Ames Baldwin Wyoming Co., Parkersburg, W. Va.) Price varies. Regular weight, very well balanced. Probably the best American shovel. **AA**

*Oliver Ames Spade* (Ames Baldwin Wyoming Co.) \$2. First quality, regular size and weight. **AA**

*Ladies' Shovel*, No. 115 (Ames Baldwin Wyoming Co.) \$1.25. Blade 7 x 10½ in., 49 in. over-all, lightest weight shovel of good quality. A favorite, too, of many men, for light work.

*Pony Shovel* (Ames Baldwin Wyoming Co.) Regular No. 2 size but lightweight. Price varies. Short or long handle; long handle usually the more useful.

*Hercules Long Handle, Round Point Shovel*, Cat. No. 99—8295 (Distrib. Sears, Roebuck & Co.) \$1.39 plus postage. Blade 9 x 11½ in., of medium carbon steel, polished. Handle 46 in., held in tubular socket by 2 rivets. Balance, good. Indicated durability, good.

*Campers' Shovel* (The Wood Shovel & Tool Co., Piqua, Ohio) \$1.35. Small size, light and strong.

*Merit Short Handle, Square Point Shovel*, Cat. No. 99—8268 (Distrib. Sears, Roebuck & Co.) \$1.15 plus postage. Blade 7½ x 12 in., of medium carbon steel, polished. Handle 27 in., held by 3 rivets in socket split for part of its length. Balance, good. Indicated durability, good.

*Anniversary Garden Hoe* (Distrib. The George Worthington Co., Cleveland) 95c. Blade 4½ x 6 in., forged from medium carbon steel, polished. Handle 55 in., held in tubular socket by 2 nails. This socket and the blade are forged as one. Balance, good. Indicated durability, good.

*Corn Hoe* (American Fork & Hoe Co., Cleveland; also Union Fork & Hoe Co., Columbus, Ohio) \$1.15. Blade 7 x 2½ in., handle 52 in. The *Meadow Hoe* and the *Ely Tobacco Hoe* are similar to the *Corn Hoe*. A 7-in. shallow blade is usually best for home gardening.

*Round Top Onion Hoe* (American Fork & Hoe Co.; also Union Fork & Hoe Co.) \$1.25. Blade 7 x 3 in.

*Hercules Heart-shaped (Warren) Hoe*, Cat. No. 99—8446 (Distrib. Sears, Roebuck & Co.) 98c plus postage. Blade 4¾ x 6 in., forged from medium carbon steel, polished. Handle 52 in., held in tubular socket by 2 nails. This socket and blade forged as one. Balance, good. Indicated durability, good.

*Hercules Bow Garden Rake*, Cat. No. 99—8388 (Distrib. Sears, Roebuck & Co.) 95c plus postage. Rake 14 in. wide, 14 curved teeth 3 in. long, forged from mild carbon steel. Handle 60 in. 2 tangs join and are held in end of handle with 1 nail (good construction). Balance, good. Indicated durability, good.

*Anniversary Bow Garden Rake* (Distrib. The George Worthington Co.) 95c. Rake 14½ in. wide, 14 curved teeth 3 in. long, forged from mild carbon steel. Handle 60 in. 2 tangs join and are held in end of handle with 1 nail (good construction). Balance, good. Indicated durability, good.

*Floral Rake* (American Fork & Hoe Co.; also Union Fork & Hoe Co.) 60c. Rake 6 in. wide, 6 curved teeth 2½ in. long. Handle 48 in. For special light work only. Excellent cultivator. Rated *A* for its great convenience for many uses, although the head is unriveted.

*Gumfinger Rake* (Sabin Machine Co., Cleveland) \$1.25. Lawn rake with rubber teeth, 20 in. wide.

*Yamade Brum Rake* (Geo. W. McGuire, Whitestone,

## A. Recommended (contd.)

- L.I., N.Y.) \$1.25. Best-quality bamboo, steel-reinforced lawn rake.
- Eureka Weeder*, No. EL 4 (American Fork & Hoe Co.) 70c. Cultivator, 3 teeth. Handle 48 in. Not as useful in the average garden as the *Floral Rake*.
- True Temper Turf Edger or Cutter* (American Fork & Hoe Co.) \$1.20. Blade 9 x 5 in., forged from medium carbon steel, polished. Handle 48 in. Tang driven into end of handle. Tang and blade forged as one. Balance, good. Indicated durability, good.
- Garden Raiser*, No. 3 (Alexander Mfg. Co., Ames, Iowa) \$7. Probably the best light-wheel cultivator sold, but not offered by many retailers because the margin of profit is small.
- Mason's Trowel (Wm. Johnson, Newark, N.J., makes a good one) 45c. Blade 5 in. Does not take the place of a garden trowel (as such, rates only C) but is a good hand cultivator and weeder.
- True Temper Trowel* (American Fork & Hoe Co.) 90c. Drop-shank model with solid socket is one of the best made.
- Garden (Nurseryman's) Trowel. A good grade costs about 50c. Blade 6 in.; blade and shank in one piece. Wooden handle. Do not confuse with the undesirable narrow "transplanting" trowel.
- Merit Hand Cultivator* (Distrib. Sears, Roebuck & Co. retail stores) 8c. Very good value. The same tool, all metal except for a wooden handle-end, sold in 10c stores at 10c.
- Kunde Model*, Pruning Shears (Distrib. A. M. Leonard & Son) \$5. Slender, pointed blades, heavy frame, rubber-covered handles. First choice of experts. AA
- Disston Pruning Shears*, No. 154 (Henry Disston & Sons, Tacony, Philadelphia) \$3.30. 2 blades. Volute spring, which is durable.
- Lopping Shears* (Tiffany Mfg. Co., Conklin, N.Y.) \$2.75. A strong long-handled pruner with narrow blades for working in small spaces. 20-in. length a good size.
- HKP Forester* (H. K. Porter, Inc., Everett, Mass.) \$5.50. The best pruner for heavy work, clearing brush, etc. Makes a close cut, but jaws too heavy for very narrow spaces. All parts replaceable. 27-in. size, capacity 1½-in. diameter.
- Electric Hotbed Units* (General Electric Co., Schenectady, N.Y.) Indicating thermostat, \$9; 60-ft. heating cable \$3.75. To this add cost of connecting to nearest electric outlet. At 7c per kilowatt initial rate, costs about \$2 a month for 2-sash hotbed. Cheaper than manure, when once installed.
- Veneer Bands* (Albany Box & Basket Co., New Albany, Ind.) 4 x 4 x 4 in. with no bottom, \$2 per thousand. Thin wood strips. Fold to make square pots with or without bottom. Used extensively by commercial growers for transplants which are hard to move in large sizes, and as collars to protect plants from cutworms.
- Earthenware Pots have proved the best plant containers. Should be kept on a moist surface.
- Feeny Duster*, Models D and F (Feeny Mfg. Co., Muncie, Ind.) Model D, \$2.50; F, \$4.50. Plunger type with extension nozzle. Efficient, though flow of dust is not steady. Larger size much the easier to empty and refill for changes of dust.
- Pomo-Green Dusters* (Feeny Mfg. Co.; distrib. Niagara Sprayer & Chemical Co., Middleport, N.Y.) Identical with the above.
- Platz Green Hand Duster* (Distrib. P. O. Roediger, Vineland, N.J.) \$6. Capacity 2 to 4 lb. Bellows type, light, easy to use; the most efficient hand duster.
- Handy Box Duster* (Keystone Box Co., Pittsburgh; distrib. Clean Home Products Co., Chicago) 25c

## A. Recommended (contd.)

- each; singly, perhaps a little more. Cardboard box, bellows type, holds 2 lb of dust. Recommended if a separate one is used for each kind of dust. Much better than dollar-size metal dusters. Specify that you want it empty.
- March Automatic Lawn Sprinkler* (March Automatic Irrigation Co., Muskegon, Mich.) Small size, \$18. Large coverage, for flat lawns. Very durable, efficient.
- Cricket Type Sprinklers* (W. D. Allen Mfg. Co., Chicago) Box of 4, \$2.50. Inserted in short sections of hose. Small coverage, fine mist. Suited to uneven lawns, where areas vary in water requirements.
- Lark Tee Sprinkler* (Distrib. golf-course supply companies) \$7. Large coverage on low-water pressure.
- Cast Brass Fan Sprinkler*, Cat. No. 9-6956 (Distrib. Sears, Roebuck & Co.) 35c plus postage. Hose nozzle, convenient shape.

## B. Intermediate

- Pony Spade* (Ames Baldwin Wyoming Co.) \$1.25. Lightweight, not strong enough for any but the lightest work.
- Banton Flexsteel Long Handle, Round Point Shovel* (American Fork & Hoe Co.) \$1.50. Blade 9 x 11½ in., of medium carbon "blister" steel, unpolished. Handle 47 in., held in tubular socket by 2 rivets. Balance, good. Indicated durability, good.
- Forest City Short Handle, Square Point Shovel* (Distrib. The Wood Shovel & Tool Co.) \$1.25. Blades 7½ x 12 in., of medium carbon steel, polished. Handle 26½ in., held by 3 rivets in socket split for part of its length. Some users considered grip awkward. Might merit an A rating, if you like the feel of it. Balance, fair. Indicated durability, good.
- Boy's or Floral Fork* (American Fork & Hoe Co.; also Union Fork & Hoe Co.) \$1. 4 tines, 7 in. long. Handle 30 in. with D top. Only for light work, but convenient size.
- The George Worthington Co. Wheel Cultivator (no name or trade-mark) \$2.95 delivered. Equipped with 5-tooth weeder, double-pointed shovel, and turnplow of mild carbon steel. 23 in. wheel. Wooden handle bars and hand grips.
- Garden King Wheel Cultivator*, Cat. No. 187-878 (Distrib. Montgomery Ward & Co.) \$2.98 plus freight. Equipped with 7-in. scuffer, 5-tooth weeder, double-pointed shovel, and turnplow, of mild carbon steel. 23 in. wheel. Iron handle bars and grips, judged less comfortable than wooden grips.
- Sears, Roebuck & Co. Wheel Cultivator, Cat. No. 32-6247 (no name or trade-mark) \$2.89 plus freight. Equipped with 5-tooth weeder, double-pointed shovel, and turnplow of mild carbon steel. 23 in. wheel. Iron handle bars and grips, judged less comfortable than wooden grips.
- Merit Garden Hoe*, Cat. No. 99-8410 (Distrib. Sears, Roebuck & Co.) 39c plus postage. Blade 4½ x 7 in., forged from medium carbon steel, not polished. Handle 49 in. Tang driven into end of handle. Tang and blade forged as one. Balance, fair. Indicated durability, fair.
- Eclipse Two-Prong Weeding Hoe*, Cat. No. 484-5894 (Distrib. Montgomery Ward & Co.) 49c plus postage. Blade 3½ x 9 in., dished, of hot rolled mild carbon steel. Handle 52 in. Tang riveted with single rivet to blade and driven into end of handle (poor construction). Balance, good. Indicated durability, fair.
- Merit Two-Prong Weeding Hoe*, Cat. No. 99-8420 (Distrib. Sears, Roebuck & Co.) 48c plus postage. Blade 3½ x 8¾ in., dished, of hot rolled mild carbon steel. Tang riveted to blade with single rivet and



## B. Intermediate (contd.)

- driven into end of handle (poor construction). Balance, good. Indicated durability, fair.
- Star Two-Prong Weeding Hoe* (Star Manufacturing Co., Ashtabula, Ohio) 60c. Blade  $3\frac{1}{2} \times 9$  in., flat, of hot rolled mild carbon steel. Handle 53 in. Tang fastened to blade with 2 rivets (good construction) and driven into end of handle. Balance, good. Indicated durability, fair.
- Eclipse Straight-Tooth Garden Rake*, Cat. No. 484—5865 (Distrib. Montgomery Ward & Co.) 45c plus postage. Rake 14 in. wide. 14 teeth  $2\frac{3}{4}$  in. long, stamped from mild carbon steel. Handle 61 in. (short). Tang driven into end of handle. Balance, good. Indicated durability, good.
- Fulton Straight-Tooth Garden Rake*, Cat. No. 99—8384 (Distrib. Sears, Roebuck & Co.) 45c plus postage. Rake 14 in. wide. 14 teeth  $2\frac{1}{2}$  in. long, stamped from mild carbon steel. Handle 60 in. (short). Tang driven into end of handle. Balance, good. Indicated durability, good.
- Anniversary Straight-Tooth Garden Rake* (Distrib. The George Worthington Co.) 75c. Rake 15 in. wide. 14 teeth  $3\frac{1}{4}$  in. long, stamped from mild carbon steel. Handle 66 in. Tang driven into end of handle. Balance, good. Indicated durability, good.
- Hercules Hand Cultivator*, Cat. No. 99—8432 (Distrib. Sears, Roebuck & Co.) 89c plus postage. 5 small blades  $1\frac{1}{4} \times 2\frac{1}{2}$  in. at ends of curved rods clamped to blade holder, forged from medium carbon steel. Handle 49 in., held in tubular socket by nails. Considered heavy and awkward to handle. Indicated durability, good.
- Lakeside Hand Cultivator*, Cat. No. 484—5901 (Distrib. Montgomery Ward & Co.) 89c plus postage. 5 small blades  $1\frac{1}{4} \times 2\frac{1}{2}$  in. at ends of curved rods clamped to blade holder, forged from medium carbon steel. Handle 49 in., held in tubular socket by nails. Considered heavy and awkward to handle. Indicated durability, good.
- True Temper Invincible* (American Fork & Hoe Co.) \$1.25. 5 small blades  $1\frac{1}{4} \times 2\frac{1}{2}$  in. at ends of curved rods clamped to blade holder, forged from medium carbon steel. Handle 52 in., held in tubular socket by nails. Considered heavy and awkward to handle. Indicated durability, good.
- Merit Trowel* (Distrib. Sears, Roebuck & Co.) Not first quality, but very good value at 8c. Same trowel with wooden handle tip, sold at dime stores, 10c.
- Snap Cut Pruning Shears* (Seymour Smith & Son, Oakville, Conn.; *Hercules Marvel Cut*, \$1.49, exactly the same except for the finish, distrib. Sears, Roebuck & Co.) \$1.75,  $7\frac{3}{4}$  in. The single blade must be kept sharp and must not be used on stems too large for it, or the anvil bruises the bark. Cheap, replaceable parts.
- SS No. 30 Pruning Shears* (Seymour Smith & Son) \$1. Volute spring, 2 blades, length  $8\frac{1}{2}$ .
- Wards Pruning Shears*, Cat. No. 584—5990 (Distrib. Montgomery Ward & Co.) \$1.25 plus postage. Cutting blade  $1\frac{1}{2} \times 2\frac{1}{2}$  in. forged from medium carbon tool steel. Handle  $21\frac{1}{2}$  in. Each tang driven into the end of its handle, which has a ferrule with no straps extending along handle. Balance, fair. Indicated durability, fair.
- G. & O. Sprayer* (Goulard & Olena, Inc., 140 Liberty, N.Y.C.) \$1.65. 1 qt. All brass, superior quality, as sprayers go. Angle nozzle furnished.
- G-V Sprayer*, No. 10 (G-V Sprayer Co., Wichita, Kans.; distrib. Electric Sprayit Co., South Bend, Ind., as *Electric G-V*, No. 10) \$1.85. 1 qt. Copper. No angle nozzle.

## B. Intermediate (contd.)

- Vermorel Eclair Sprayer* (Distrib. P. O. Roediger) \$20. 3-gal brass knapsack sprayer, weighs 17 lb empty. Probably the best hand sprayer which can be operated by one person, but many people find it too heavy.
- Smith Banner Compressed Air Sprayer* (D. B. Smith & Co., Utica, N.Y.) \$4. Galvanized. Considered the best make in this unsatisfactory type. Do not buy the brass tank; the sprayer gives out too soon to warrant it.  $2\frac{1}{2}$  gal size most desirable.
- Bird Neponset Plant Box* (Bird & Son, East Walpole, Mass.) Waterproof paper, no drainage.
- Plain Paper Pots.

## C. Not Recommended

- Garden Tool Sets. Often not more than 1 or 2 useful tools in the lot.
- Planet Jr. Jiffy-Hoe* (Distrib. S. L. Allen & Co., Inc., Philadelphia) \$1.90 plus postage. Equipped with 3-tooth weeder, forged from mild carbon steel. 11 in. wheel. Single wooden handle and bar (similar to a lawn mower, but not shaped to fit hand comfortably). Handle warped. Design considered inferior, and convenience in use doubtful.
- Brum Rakes*. Unreinforced bamboo. Made in Japan. Not durable.
- Norcross Cultivator* (some called *Diamond Pointed*). Too heavy.
- Extra Tool Handles, for shovels, etc. Cannot be fitted at home. A new tool is as cheap as having the job done at a shop. Better buy good tools.
- Merit Hand Digging Fork* (Distrib. Sears, Roebuck & Co., also at 10c stores, minus the *Merit* name). Not even worth the price of 8c.
- Merit Pruning Shears*, Cat. No. 9—8615 (Distrib. Sears, Roebuck & Co.) \$1.19 plus postage. Cutting blade  $1\frac{1}{2} \times 2\frac{1}{2}$  in., forged from medium carbon tool steel, soft. Handle 24 in. Indicated durability, poor.
- Any small size (pint) metal dusters, unless to be so used that the dust is not changed.
- Brown's Auto Spray*, No. 26 A.G. (E. C. Brown Co., Rochester, N.Y.)
- Smith's Savol Sprayer* (D. B. Smith & Co., Utica, N.Y.) These, like the great majority of small sprayers, are likely to leak soon.
- Cel-O-Glass* (Acetol Products, Inc., Wilmington, Del.) Not recommended for cold frame use.

*Editors' Note:* These are the fourth and fifth articles in a series constituting a revision of CR's Special Bulletin 18b—Gardening. The sixth on "Insecticides and Fungicides," the last of the series will appear in Consumers' Research Bulletin for May 1937.

## Corrections to:

Consumers' Research Bulletin  
issue of February, 1937

**Page 30 Gardening:** Add to comment on *Own-root Roses*, "Will develop satisfactorily in 3 to 4 years in climate as warm as Washington, D.C."

**Page 31 2nd Column:** The correct address of the Portland Wholesale & Retail Nursery Co. is Portland, Oregon.

**Page 32 1st Column:** Delete listing of the book *Pioneering with Wildflowers*. Numerous and important errors are reported by experts to be present in its text.

## Collection Agencies

**A**N INDIVIDUAL WHO has failed to pay promptly a bill which he owes for merchandise or services sometimes finds that the collection of such an unpaid account has been turned over by the creditor to a collection agency. Usually, before this happens, the creditor communicates with the debtor in a last effort to collect the debt himself, warning the debtor that if the account remains unpaid it will be turned over, or "sold," to an agency.

If a final letter comes from the creditor and the debtor pays no attention to this warning, he can hardly be surprised if the warning is followed by the assignment of the debt to the collection agency. But, even in such a case, the debtor, while thoughtless and neglectful, is not an outlaw, and should not be treated as having no standing. He does not, by failing to meet his obligation, or even to take steps to ward off the assignment of the debt to a collection agency, lose any of his rights.

Once the account has been transferred to an agency for collection, the debtor is likely to be considerably bothered and annoyed. But, as a matter of law, the collection agency has no greater right against the debtor than had the original creditor. By assignment of the account, the agency simply steps into the creditor's shoes and has all the rights which the creditor had against the debtor, but no others. Consequently, any defense which existed against the payment of the debt or which would operate to reduce the amount due, the debtor can assert as well against an agency as against the original creditor.

It is not necessary for the debtor to concern himself with annoying or insulting communications from the agency. He is under no obligation to pay the slightest attention to letters or other communications from the agency unless these communications notify the debtor that a judgment has been, or is about to be, taken against him for the debt. Of course, he cannot safely disregard any court process of which he gets notice.

In most jurisdictions, no valid judgment can be obtained without personal service on the debtor of the process of the court, either a summons or its equivalent, thus giving him notice of the action and an opportunity to defend. Often, though, an unscrupulous process server will report to the agency that he has served process on the debtor when, in fact, he has not done so. Or the process may have been served on someone other than the debtor through a mistake in identity. In either case, if the representative of the agency files in court the usual affidavit showing that the defendant has been served, the court will, unless notified of the mistake or deception in the affidavit of service, enter a judgment in favor of the agency against the defendant. This entry of judgment can be prevented, or set aside, in every case where personal service on the defendant is required and has not been made, if the defendant will give the court timely notice that he was not served.

Even if the defendant is properly served and a valid judgment against him obtained, the debtor need not be concerned about the judgment if he

has no property from which to pay it and if he has no income subject to claims of creditors. The law in most states of the United States has abolished imprisonment for debt except in cases involving fraud or deceit, so that, even if a judgment is obtained against the debtor in an ordinary commercial case, he need not fear being sent to jail and, if he has no assets from which to pay, he need not particularly concern himself about the judgment. When the debtor has not the means to pay it, there is nothing the creditor can do.

The agency will, of course, use every effort to discover whether the debtor has funds, or is in receipt of a salary which can be garnisheed, in whole or in part. To obtain this information the agencies, which often operate under high-sounding names adopted for the purpose of disguising the nature of their business, resort to all kinds of subterfuges, even at times claiming that they are engaged in tracing the heirs of an estate, that it would appear from their records that the defendant is such an heir, and that, if so, he is entitled to a portion of the estate. To prove his identity and thus entitle him to his inheritance, the agency asks a number of apparently innocent questions, from which, however, it is able to obtain the information which it seeks about the defendant. A debtor should be on his guard when notified of an unexpected windfall, such as participation in an estate or an undelivered package in the hands of a transportation or express company, especially if such notification is accompanied by some form of request that he furnish further facts about himself allegedly in order to make his identification more certain. As likely as not this will prove to be the beginning of an effort to ferret out details of the debtor's financial situation.

Even if the defendant is employed, and in receipt of a salary, and the agency discovers this fact about him, it should be noted that in many jurisdictions the plaintiff who has recovered a judgment is not entitled to garnishee the whole of the defendant's salary but only a limited percentage thereof, or so much thereof as the court decides is not required for the support of the debtor and his family. Of course, if the debtor has a bank account, an automobile, or other assets (except necessary household equipment and the tools of his trade, which are usually exempt from levy) the creditor is given the right to compel the debtor to apply so much of these assets to satisfy the debt as may be required.

Moreover, if the agency adopts a policy of pressing the creditor by having its representatives follow him or hang out about his place of business or residence or by placarding it, the debtor may often succeed in having such conduct ended by a complaint to the duly constituted authorities, accusing the agency of disorderly conduct, criminal libel, or blackmail, whichever may apply. Frequently, the tactics adopted by collection agencies have proved to be not only grossly improper but actually illegal, and the agencies have subjected themselves to an action for damages on the part

of the debtor. This has happened, for instance, where the agency has stationed a man or a vehicle in front of the debtor's premises, carrying a sign setting forth that the debtor owes So-and-So a sum of money and that until he pays it the sign will not be removed. Another plan which is illegal, is the mailing of a communication by the agency to the debtor enclosed in an official looking envelope, the communication being an imitation of a court process to which an imposing looking seal has been affixed; the whole business is deliberately calculated to make the debtor think that he is receiving some form of court document requiring payment by him under penalty. Various other illegal forms of harassing the debtor are also sometimes used, such as mailing letters on which the sender's name appears as "Bad Debt Collection Agency," but a debtor who does not permit himself to be intimidated by such illegal proceedings may well find himself in a position successfully to sue the collection agency for its improper conduct. Verdicts in favor of the debtor against collection agencies which have gone too far are obtainable under the decisions of many of the states.

It should be borne in mind, of course, that if a debt is owed, the creditor is entitled to be paid and that the debtor must make a reasonable effort to pay. The debtor should not disregard communication after communication from the creditor calling his attention to the debt and urging him, more or less impatiently, to pay it. But there are occasions when the debtor either cannot pay at the moment, or cannot pay in full at one time. In either of such situations the proper procedure is for the debtor to take the matter up with the creditor, explaining the situation and trying to come to some understanding as to when, and at what rate, the debt will be paid. If the debtor can reach some satisfactory understanding, well and good. If he cannot, the creditor will use the court's process to attempt to compel payment. In such case, the debtor must be careful to obey all court orders lest a failure to comply be used as a basis for having the debtor held in contempt of court. If the proceedings reach this state, the debtor's situation is so serious that the debtor should no longer try to get along without a lawyer's advice to guide his every step.

WILLIAM S. WEISS

## Men's Socks

THE RESULTS OF CR'S TEST on men's silk and rayon socks indicate that the most economical ones to buy and use are those costing about thirty-five cents, or three pairs for a dollar—also the price of the best values which were found by CR in an earlier test. The cheaper socks in the test were far less durable than the middle-priced socks. It turned out that the more expensive ones were superior to the thirty-five-cent socks mainly in less tangible qualities such as finish and appearance. As CR has counseled in an earlier report, a person who buys socks should be sure of securing a size which will give a fairly loose fit after washing. The socks, moreover, should be sturdy or well reinforced in the three places subject to severest wear, namely, the toe, heel, and the "high splice" (the trade's name for the area of reinforcement just above the sock's heel). An elastic rim or ring woven at the top of some socks for support without the use of garters is tentatively judged less satisfactory than the type having a separate one-inch elastic band attached at two points.

The present ratings are based on an abrasion test of the toe, heel, and high splice of each sock run on CR's specially designed wear-testing machine. All socks laundered satisfactorily except for the shrinkage as noted in the listings. All ratings are cr 37.

### A. Recommended

*Magic Buyer* (Distrib. W. T. Grant Co. stores) 35c per pair. Silk. Comparatively heavy weight. Resisted abrasion very well. On this account and because of price, judged to be the most economical sock of 11 brands tested. 1

### B. Intermediate

*Apollo* (Distrib. S. H. Kress & Co. stores) 25c per pair. Silk. 1

*Hanover* (Penbrook Knitting Co., Harrisburg, Pa.; distrib. Hanover shoe stores) \$1 for 3 pairs. Silk. 1

### B. Intermediate (contd.)

*Interwoven* (Interwoven Stocking Co., New Brunswick, N.J.) 50c per pair. Silk. 2

*Interwoven Nu-Top* (Interwoven Stocking Co.) 50c per pair. Rayon. Elastic top. 2

*Esquire* (Distrib. Weber & Heilbronner stores) \$1 per pair. Silk. Full fashioned. Garters attached. 3

*Interwoven* (Interwoven Stocking Co.) 75c per pair. Silk. Indicated durability, somewhat less than found for the lower-priced socks of this brand. 3

### C. Not Recommended

*Lancelot* (Distrib. S. H. Kress & Co. stores) 20c per pair. Rayon. Indicated durability, poor. 1

*Grant's Wearite* (Distrib. W. T. Grant Co. stores) 25c per pair. Rayon. *Lastex* top. Indicated durability, poor. Large shrinkage would require purchase of one-half size larger than ordinarily worn. 1

F. W. Woolworth Co. 25c per pair. Low cut. Silk and rayon. Indicated durability, poor. 1

F. W. Woolworth Co. 25c per pair. Silk and rayon. Indicated durability, poor. 1

## Consumers' Test Manual

As this *Bulletin* goes to press we are glad to announce that the first section of the long-awaited *Consumers' Test Manual* is in the hands of the mimeographer. Copies will be ready to be mailed the latter part of April to those who have ordered the Manual.

The *Consumers' Test Manual* presents simple and readily-applied tests of common household articles and supplies—tests which are suitable for use particularly by college and high school teachers and students, but also by individual consumers and consumer groups generally. Section I is devoted to chemical tests. It will comprise approximately 100 mimeographed pages. The price is 50c.



# The Problem of Buying a Home

## II

WHAT PRECAUTIONS are to be adopted? What inspections should be made? What technical advice ought to be obtained before buying a house? Before listing any precautions in detail, I want to discuss items of general importance.

First I want to impress on prospective owners that buying a home is one of the two or three most important decisions of one's life, one that has the most far-reaching influence. We are so used to buying relatively standard products, such as motor cars, refrigerators, radios, that we don't realize what a hit-or-miss industry the building of homes is. Ex-tailors, ex-carpenters, ex-anybody becomes a speculative home builder. There is no standard; there is almost no bottom in quality and adequacy. Again, a home is a complex mechanism, and one which cannot be discarded or traded in if one has made a mistake in judgment. The main questions to be considered are: how to guard against one's own unpreparedness, one's own failure to anticipate one's needs; and how to find out what one is getting.

Anyone planning to buy or build a home should for at least a year previous start to jot down his desires, and his objections to his present quarters. Every member of his family should do likewise. These lists should include the home, its surroundings, its location. The separate lists should be carefully collated, divided into "musts" and "mayas."<sup>1</sup>

This list should be based on an analysis of family habits and functions, and should concern itself especially with plan, interrelations of rooms, room sizes, and furnishability. For example, what items of furniture are required in the secondary bedroom? Does the child study and write in the living room, or in his bedroom? What exposure would you prefer for each room if you could get it? It is none too early to observe exposures in your present house and note the advantages and disadvantages of each, at *various seasons of the year*. No house should be built or purchased, in an excess of enthusiasm, without checking off against this list. Alternative houses should be compared and judged by their rating on this check list. This is vitally essential because when looking at a house it is impossible to think of more than a dozen requirements, and one has only oneself to blame if shortcomings appear later which should have been obvious if such a list had been available. This might be called a personal, family list. It should be sup-

plemented by a technical check list, which might be more or less a list made up of the items in these articles, plus more detailed items.<sup>2</sup>

## How to Find Out What You're Getting

There are two general items here: things outside the house and things inside the house. You yourself are a competent judge of only a very small proportion of these. Many of them you can't even see and you wouldn't know about if you did—quality of plaster, kind of lath, adequacy of heating system and radiation, drainage system, etc. I say categorically: *No one should buy a house without competent professional advice covering the broad neighborhood and planning questions and covering the house itself*. When you are going to spend say \$7,000 to \$10,000 for a house, the extra expenditure of \$100 to \$200 for complete inspection and report on these matters is cheap insurance. You will generally save more than that in a couple of years' maintenance, and you will save yourself endless headaches and regrets. Probably you can get such service for less, but you should pay enough to get a thorough job, enough to enable your adviser himself to get competent advice on one or two aspects on which he himself is not an expert.<sup>3</sup>

When you are buying a speculative house in a subdivision, your professional adviser should observe how other houses are being erected, even

<sup>2</sup>A brief technical list of this character has been made up by the Federal Housing Administration, entitled *How to Judge the House You Wish to Buy*, FHA Form No. 805.

<sup>3</sup>If the reader is in any doubt as to the urgent need of advice and supervision on which he can rely, I refer him to "Report to the Mayor Concerning Violations of the Building Laws in Small Home Construction in the Borough of Queens," dated September 10, 1936, and obtainable at the office of the Commissioner of Accounts, New York City. In Queens, in spite of laws, codes, and department supervision, the most shocking practices are reported which involve structural and sanitary safety. After listing a large number of specific defects, this report summarizes: "... purchasers of homes in many cases are badly deceived by the use of inferior materials and frequent violations of the Building and Plumbing Codes." A few items cited: "Floor beams are cut excessively to permit passage of plumbing pipes; studs were cut excessively and in some cases flagrantly flouting even the minimum requirements of safety... cesspools are not located the required minimum of 15 feet from foundation walls; cesspool connections were made with earthenware pipe, where regulations required them to be cast iron." This report recommends: "All plans should be prepared by and bear the seal of a registered architect or professional engineer, and construction should be made under the architect's or engineer's supervision." An unbiased report of this nature speaks volumes for the desirability of supervision and inspection, and even more volumes for the design of a house by, and under the supervision of, a capable architect. But you will never get a fine house out of a poor builder, even though competent supervision and inspection will assure structural and sanitary safety, and insure against the worst derelictions in quality of finish.

<sup>1</sup>A good book to become acquainted with at the start of your house-thinking is *The 1936 Book of Small Houses*, by the Editors of the Architectural Forum (New York: Simon & Schuster, 1936). It contains sound general advice; also plans, photographs, brief specifications and reported costs of 115 houses built in various parts of the country, ranging in price from less than \$5,000 to \$20,000. I think that they were too indiscriminate in the selection of houses, and that they are shy on adequate criticisms of the shortcomings of these houses, criticisms which would be immensely helpful to the layman. Nevertheless, the book is worth studying. The observant reader will start making his own criticisms—a useful procedure.

if the one you want is already finished. He can observe then how the concealed items are being installed. Unfortunately, he can only advise you; he cannot control for he has no direct influence over the builder. Of course, it would be best if the loaning institution or the Federal Housing Administration did this job competently, for they and the lenders do have control if they choose to exercise it. They make a stab at it now, but don't yet do it at all adequately. If they did do it adequately, they could do it much more cheaply because they could pay an architect or engineer really adequate fees which, spread over a number of houses, would be considerably less per house. As it is, the builder's slogan that Federal Housing Administration insurance means good quality is almost meaningless.<sup>4</sup>

Such technical advice and inspections would knock out many builders' slogans, or at least demonstrate whether they were justified or not. Here are a few instances:

**Termite-proof.** That sounds good to you. Actually, it may mean anything from dipping clapboards in oil to a really termite-proof job.

**Brass piping.** This may be for hot water only, or it may include cold water lines.

**Completely insulated.** Degree of insulation achieved depends on rate of heat loss. Do you know the difference in insulating quality between rockwool and Masonite? Do you know the difference between one inch of Masonite and one and one-half inches of Balsam wool? Do you know that the presence or absence of weatherstripping may mean more difference in heat loss than insulation of the roof? That storm doors and windows are an especially effective means to heat insulation?

**Air conditioning.** This can mean anything from a warm-air heating system of an inferior type through a winter humidifying system to a complete heating and conditioning system. This air-conditioning slogan is the greatest racket in the building game. Complete air conditioning involves cooling and dehumidification in summer, heating and humidification in winter, adequate circulation of air, and cleaning of air. Probably not one "air-conditioning" system in a thousand includes these. Have you any idea as to the extra maintenance cost of such a system in electric current consumption and maintenance and replacement of equipment? One trade paper reports that "it costs about three times as much to cool a room to 75 degrees when it is 95 degrees outside, as it does to heat a room to 70 degrees inside when temperature outside is zero." *Is the added comfort of the degree of air conditioning furnished worth the extra first cost and maintenance cost, both of which are high?* My guess is that air conditioning as now furnished is a rather unnecessary gadget like colored tile, but in any case you ought to know what you're getting, and in technical, quantitative terms, what conditioning performance it will afford.

<sup>4</sup>Federal Housing Administration makes three progress inspections on its insured houses, which is a good deal better than nothing. The Home Owners Loan Corporation is also discussing some form of supervision but hasn't yet provided it.

## Other General Advice

1. After you've seen the model house, check to see what items there included are going to be included in the purchase price of your house. A partial list of doubtful items includes:

- Refrigerator
- Range
- Shades or Venetian Blinds
- Screens
- Radiator Enclosures
- Linoleum
- Oil Burner
- Thermostatic Control
- Landscaping

2. **First Cost and Maintenance.** Remember that first cost is only one factor in annual cost. A \$5,000 house may, and probably will, stand you less in total cost after twenty years than a \$4,000 house of the same size, if the extra \$1,000 isn't spent on folderols and gadgets. Here is an example of conflict between first cost and maintenance cost: The exterior of a wood house should be repainted every three or four years. This maintenance item will cost somewhere around \$200 for a small house. How much more is the first cost of a brick veneer house and is the annual maintenance saving more or less than the annual financing charge on the extra cost of brick veneer?

3. **Interest rates.** Watch out for this. There may be two houses on which the monthly charges are identically the same, but the seven percent for financial charges may in one case be made up of five and one-half percent interest and one and one-half percent amortization or paydown, and in the other four and one-half percent interest and two and one-half percent amortization. In the latter case you will have paid off the mortgage some ten years sooner than in the other.

4. **The Builder.** Does he provide any guaranties? What is his reputation for delivering a sound product and for his willingness and promptness to return to take care of items that give trouble? If no guaranties are given, that speaks for itself. But even when guaranties are given, they are no better than the willingness and ability of the people giving them to make good.

5. **Inspection.** Particular items chosen at random which differentiate quality of houses should be inspected. The following are simply illustrative specimens, not a complete list<sup>5</sup>:

**Structure.** Mix of concrete, number of coats of plaster, mix of plaster. Quality of lumber both as to soundness and straightness; adequacy of nailing and bridging. Diagonal sheathing makes for a much stronger house than horizontal sheathing. Double flooring *versus* single flooring. Proper sepa-

<sup>5</sup>For much fuller information see Federal Housing Administration Technical Bulletin No. 4, *Principles of Planning Small Houses*, FHA Form No. 2219. This is a sensible pamphlet from the point of view of giving a layman general information as to what a house is and what goes into it, but its stated minimum requirements are far too low and primitive. Also its cost figures are misleading. Reference is again made here to *How to Judge the House You Wish to Buy*, FHA Form No. 805. This amplifies my random list.

ration of timbers from hot chimneys and flues. Practically all these items are invisible after completion.

Do older houses in the development show signs of excessive settling?

**Flues.** Are they smoke-tight, and do they have proper draft? Should be tested by actual fire to determine both these points.

**Watertightness.** Visit the house during and after heavy rains. Inspect cellar for leaks, inspect roof and walls, especially around doors and windows, and attic floor.

**Weather-tightness: Weatherstrips.** If steel casements, do they close snugly? Are flashings continuous, do they overlap sufficiently, are cap flashings high enough? Are thicknesses of copper, number of plies of roofing, adequate?

**Tile: What grade are you getting?** Tile manufacturers issue grading certificates. The initial quality of tile has much to do with later crazing and other causes of unsatisfactory appearance.

**Plumbing.** Pipe sizes, pipe materials, weight of material per lineal foot, or the thickness of the pipe walls—all are important factors in adequacy and life of plumbing system. Thus the term "brass pipe," usually so reassuring to purchaser, must be much further analyzed in terms of workmanship and character of the local water supply. Proper slope and sufficiently closely spaced supports to prevent sags are particularly important for sewer lines. Are plumbing fixtures seconds? Are fittings chromium-plated or only nickel-plated? Are hot-water heater and tank adequate in size? Test water pressure on top floor.

Are there connected sewers, or is disposal by means of cesspool or septic tank? Adequacy of these must be checked. Either may give serious trouble if badly designed or executed.

**Heating Systems.** Is the boiler or furnace of adequate size so that it need not be "forced," with resultant lower fuel economy and shorter life of equipment? Is the distribution system adequately sized to heat properly in cold weather? Is it free from "trapping," so as to operate quietly? Is it hot air, hot water, single-pipe steam, two-pipe steam, or vapor? What are the advantages and disadvantages of the particular system installed, and how does it compare in cost? If there is an oil burner, are adequate servicing arrangements near at hand?

**Electrical Work.** The life, safety, and adequacy of the wiring system are largely dependent upon proper design to insure a sufficient number of branch circuits and wires of sufficient diameter to prevent overloading, upon the use of quality materials and components of the proper type, and upon the quality of workmanship of the installation. The question of future electric equipment possibly to be added should be given weight in choosing wire sizes. There should be a sufficient number of base plugs so that no wire to a lamp need cross a door opening. Bracket outlets are generally a nuisance; at best they call for a symmetry of arrangement of furnishings; at worst they are sooner or later definitely in the way of a mirror or bureau. Switches in place of pull chains mean lower maintenance cost. Careful study of the convenience of switch operation is worth while (e. g., hall lights

switchable from both first and second floor, living room from both the front and rear entrances, etc.).

These specimens show the *kind* of thing the prospective home owner must weigh and look out for; they do not seek to qualify him as his own expert. It seems to me that these specimens indicate why it is so important to obtain disinterested professional advice and inspection. Many of them are technical matters which the layman can't possibly be in a position to judge but whose results will affect the cost of running the house, the pleasure the family will have in living in it, and its salability or rentability. The worst possible disservice I as a writer and professional man could do would be to give the reader a false sense of adequate knowledge from the perusal either of this article or of the other publications suggested. "A little knowledge is a dangerous thing" still, as it was in the Greek days.<sup>6</sup>

On the other hand, there is a clear limit, too, to the scope of technical advice. For instance, the individual is the best judge of whether the plan, layout, room sizes, meet the personal family list of requirements which he has made up. He himself will check to see that his furniture and what he plans later to buy, fits in properly. He knows whether there is enough closet space properly distributed. He can see whether or not there is a coat closet and whether it is conveniently located; whether there are vestibules or whether there will be cold drafts in winter when doors are opened. His wife can see whether the kitchen is satisfactorily laid out. They can judge whether they mind the stairway to bedrooms coming out of the living room, or whether they want separate access through the foyer. They can judge these and dozens of other things, *provided they have made their accumulated wishes and observations* into lists such as previously recommended.

Another thing the individual will want to find out for himself is the local governmental structure or structures, their efficiency and reputed honesty, the tax structure, how many authorities he is obliged to pay taxes to, and how much. In short, is he moving into an efficiently governed community, neither so economical as to neglect necessary social services nor so lavish or corrupt that taxes are excessive?

Most of the items listed in this section are stated negatively: things to guard against, things to watch out for. In the case of a house that is being designed for you by a capable architect, they should become positive creative factors. The architect should put himself in your place and, as it were, design as you yourself would if you had his training and experience. At each significant step of plan, of elevation, of decisions as to materials and heating system, he should explain the reasons for his recommendations as among various alternatives. If you both faithfully follow such a procedure, the end result will be satisfactory. But

<sup>6</sup>To those who have purchased homes, I recommend a book, *First Aid to the Ailing House*, by Roger B. Whitman (New York: McGraw-Hill Publishing Co.). While this is an ominous title, it is an extremely useful manual on maintenance measures, not only after the house is ailing, but to prevent it from beginning to ail.



don't be mentally lazy and expect your architect to do all the thinking and anticipating.

6. What about architecture, decoration, and style? Two quotations from different sources beautifully demonstrate the current weird American attitude toward architecture and "style." An advertisement by a developer states, among other advantages, "No two houses look alike." And in the *New York Times*, a member of the Board of Education discussing school building architecture is quoted: "What we want to avoid is a structure that someone will look at and say 'That's a school building.'" It is this attitude that accounts for the jumble of facades and "styles" that make up our communities. Is it absolutely necessary in order to express our individualities for one family home to pretend by its half-timbering that it is living in fifteenth century England, for another to pretend that it is in Colonial New England, for another to pretend it is a Norman farmhouse, for still another to be a French chateau? Why in Heaven's name *shouldn't* houses of similar function look alike? Why *shouldn't* they be recognized as present-day American houses? In the admired periods of architecture that's exactly what they did do. In unspoiled New England towns you will not find all sorts of weird styles from all countries and all periods. They are all in one characteristic idiom. They gain their charm from proper proportions of the houses themselves, from their relation to each other and to trees and gardens, and from the larger planning that makes them into pleasant towns. Some of them, as at Amherst and in Vermont, even had flat roofs while others in the same town had sloping roofs. People weren't so style-conscious then, they didn't read all the canned advice in the women's magazines, and the decorating-gardening publications. Let us use these publications as helpful guides, so far as they may be such, not as inspired commands from on high. Don't let us worry about not being in the swim, and don't let us be afraid of our own ideas.

The wealthy snob who doesn't trust his own judgment can establish his individuality by a marvelous French chateau and his neighbor can build a Renaissance palace because, vulgar as the display of taste is, the two houses are far enough apart so that the observer's sensibilities may be offended but will survive. When such houses occur twenty feet apart in our communities then the effect is simply atrocious. Such attempted avoidance of monotony simply produces the monotony of a jumble. And we pay for this gratuitous ugliness. False gables, turrets, pediments, columns cost money to build, money that can either be saved to the owner or devoted to better quality or more space in the house. We have learned how to heat buildings, so why should we slavishly retain small windows, smaller than we would like if we weren't so conscious of "style"? As we have learned how to insulate roofs why should we retain gabled roofs low enough at the eaves so that we bump our heads and so that we get the inferior lighting and ventilation of dormers? Let us do what all other significant, self-respecting periods of architecture did, let us plan and design to suit *our* needs, let us

use materials and methods that represent the progress we have made in them, let us design simply, in terms of local materials when they are cheaply available, let us not constrict our living habits in the strait-jacket of dead styles. In medieval Europe when Gothic was flowering, it was the outgrowth of general current tendencies, newly discovered structural principles. The result was similarity of architectural idiom. One did not then run suddenly into a new cathedral copied from an Egyptian temple or into a reproduction of the Parthenon.

It must be emphasized that these stylistic tricks cost money. Another item of a different sort, but equally pernicious, is colored tile. Why anybody should spend good money on the horrible color combinations one sees, except for the purpose of insisting on being as ugly as one's neighbor, I do not know. As I see it, a clever developer got the idea originally. In the beginning when few had it, it probably served to enhance "individuality." The next stage was the urge to keep up with the individualists. Now that everyone has it, couldn't we start all over and save money? Especially as with a white or neutral background the bathroom looks much cleaner, and a touch of color as in bottles or towels is much more effective.<sup>7</sup>

The same remarks apply to furniture and decoration. The primary function is to get what is required to suit the family's daily habits and duties, things that require a minimum of cleaning and maintenance. Simple furniture with good lines, effects obtained through skillful combinations of color, of fabrics, and floor coverings are far better and more livable than pretentious seeking after style, accompanied by a vast quantity of irrelevant "richness" and ornamentation.

### *What Can Consumers Do About It All?*

By this time the reader will have concluded that if so many things have to be thought of, so many precautions taken, so much advice sought, there must be something very wrong with the home building industry. Well, there are many things wrong. About some, the consumer is at present relatively powerless; in others, group consumer action may accomplish something.

1. No control of land use. A major reason for the almost universal deterioration of all communities and neighborhoods is absence of land ownership or control and general planning on the part of the local government. Hindered only by the minor impediments of zoning and deed restrictions, neighborhoods change; traffic arteries are opened which place a hitherto quiet community in a maelstrom of traffic. Individual but cumulative exceptions are granted to zoning laws which even at the start were not sufficiently rigid. Soon a few residents move out and sell to anybody they can, in order to liquidate. Others follow. A new development attracts them, and the new development goes the same path. We need a land use program as part of village, town, city, and regional planning.

<sup>7</sup>See also page 10 of *Property Standards*, Circular No. 2 of Federal Housing Administration.

2. The huge home building industry is split up into myriad small, irresponsible units. In all our other industries of similar aggregate size, there are a relatively small number of producing and distributing units of responsibility and reputation whose products are a by-word; they must maintain a certain standard, whatever that standard may be. They conduct research, and take steps to improve their product. In the building industry, both the producing and distributing functions, but especially the distributing function, are split into small units; and in most cases producer and distributor are entirely separate—the one is not a representative of the other. The distributor (i.e., builder and developer) is small, doesn't control much product, does not concern himself to improve his product in any essential way, either in large planning or in individual houses—largely because he hasn't large capital permanently behind him. He has not devised any way to employ labor steadily, so that it isn't particularly efficient. As his business is essentially non-repetitive he prefers maximum immediate profits. As a result of this complete lack of standard, the purchaser must guard himself by such methods as were described above *until the building industry becomes rationalized.*

What effect further prefabrication will have on this situation it is yet too early to say. Much of the material now used is prefabricated (plumbing fixtures, boilers, refrigerators, etc.). The newer effort is toward wall and roof sections. There is every prospect that research will make these practicable, and the extra degree of prefabrication should result in some economy due to less field work; since in such work efficiency is less under control. There will also be better control of product as machine precision replaces hand work in the field. But essential economy will not come until the distributive process is rationalized and integrated with the productive process as it is in other major industries. The technology of prefabrication is well along. Its arrival is held up by the reluctance of big producers to disturb the cumbersome traditional distributive setup. I have not commented on the host of prefabricated materials now offered. It would require a research report in itself. However, as all are relatively new, it would seem that users should expect them to come with extended guaranties, of companies that may be expected to stay in business for a long time.

While there is every prospect that research will eventually make these practicable, and while the extra degree of prefabrication should eventually result in some economy due to less field work where efficiency is less under control, essential economy and essential superiority will, as I have noted, probably not come until the distributive process is rationalized, and hooked up to a rational productive process, as it is in other major industries.

3. Financial uncertainty. Even if the above two major defects were remedied, there remains the question of the average purchaser's lack of security over the fifteen- or twenty-year period during which he must complete payment of his house. Will he hold his job that long at adequate salary?

Will he be compelled to move away to hold his job or to get another? It seems to me that consumers ought to start a movement for protection of the purchaser's down payment, either by way of complete insurance as in the case of the mortgagee, or by way of being guaranteed the return of at least part of his investment under certain conditions. This should be pushed before the next boom makes us forget what we have learned in the past depression.

4. Effect of shortage on consumer effectiveness. Whether such insurance can be got at this stage, or whether any other broad change can be achieved by consumers at this time is extremely doubtful. A couple of years ago both the government and the builders would probably have listened respectfully. But now, with a housing shortage practically upon us, both government and builder are in a much more take-it-or-leave-it frame of mind.

There is also some possibility that relatively small well-knit consumer groups might affect particular builders' operations, and that such effects might spread to other builders. This will be discussed next.

5. Consumer groups. Except in the case of clients who employ an architect for an individual design, the consumer has little influence on the house he is to occupy. The consumer has mainly only a negative influence. By saying "No" in great enough numbers, he can get some of his reactions across. But as a class he can't say "No," in general, because there is no one he can go to for a better or more rational product. Competitive builders put out roughly similar products, in the building of which the consumer has had no creative part.

Concentrated groups of consumers might by some joint method exercise a degree of creative control over their homes. This they could do in two ways. By canvassing their needs and desires they could see that builders were informed of them and probably such information would affect the more intelligent and conscientious builders. But a consumers' group could do an even more positive thing. A reasonably small, well-knit group could decide to buy in a given development, provided it was carried out with a general community plan, with house groupings and with house plan and quality, which the group had had a creative part in determining. If that could be achieved, then such recommendations as I have made and as are made in the pamphlets I have referred to would no longer need to be merely limiting, protective, negative conditions, but could enter positively into the fabric of the particular developer's program. He too should gain, because he has the advantage of consumer advice, and a fairly definite group whom he would be sure to be satisfying. Of course, such a scheme would need to be carefully thought out first, and a builder of reliability and understanding selected. Self-restraint would have to be exercised by the members of the consumer group, and an awareness that in spite of this device it would still be true that not every individual could get what he would like in every detail, and 100 percent.

But if some such steps could be consummated,

a vastly improved and more fitting product would result. For instance, it is well known that free-standing houses are unnecessarily costly, both in first cost and maintenance (especially heating) as compared with houses in groups of, say, four. In many ways such groups are pleasanter as compared with the free-standing house on a comparatively small plot of 40x100, or 50x100. For as compared to the latter, the concentration of building in groups results in much more open space between groups so that the whole effect is freer, and more open. When small plots are involved, the free-standing house has actually less privacy than the attached house, because side windows look across at each other and because noise is communicated to both houses across the comparatively narrow spaces between. While the superior economies and amenities of group houses seem to me quite convincing, most speculative builders don't dare to try them because they don't know what the public reaction will be. If they knew of definite groups who would want this type of house, they would no doubt supply them.\*

Again, such consumers' groups could, if that were their view, prevail upon a particular builder not to waste money on phony architectural effects, trick plaster, colored tile, etc., thus achieving a notable economy.

As another instance, I would cite the question of houses for rent. The percentage of good houses for rent is relatively small. Yet for various reasons, some of which I have cited, many people may want to rent rather than buy. The developer generally does not believe that sufficient numbers of satisfactory types of families want to rent to make it worth his while to build for rent. If he had definite information, through an organization of consumers, that there was considerable demand, he might well do so.

Again, there is generally speaking no guaranty of the house for any adequate period of time after purchase. Particular groups might successfully insist on this, and it then might "catch on."

Summarizing briefly the purpose of these articles, I have first taken the home building situation as it is and have tried to give the layman the considerations that seem important in determining whether to buy a house, and then, if he decided to do so, an analysis of what to look for and what to look out for. I again wish to emphasize that I have not sought, through these articles, to make anyone a qualified specialist, but simply to orient him in an introductory way. The thing I do emphasize is that each family must have become a specialist *as to its own needs*, by preparing and codifying its own needs and desires and checking prospective houses against them, before buying any house.

\*An attractive and brilliantly successful example of group housing is the Chatham Village development, some 250 houses in Pittsburgh, occupied by excellent people with great satisfaction. Group housing in groups of four or six is not, of course, to be confused with the endless dreary row-houses that are too familiar in big cities and suburbs everywhere.

Later on I indicated what the basic defects in the home building situation were that made articles necessary containing so many pages of description and precaution. And finally I pointed out what reasonably small consumers' groups might do about it in a creative way. I restricted my advice to this kind of action because it seems to me that the broader action necessary to remedy basic ills is at this time not within the grasp of the consumer.

Before starting to write these articles, I considered whether to point advice and suggestions directly at particular income and house-price groups. Exploring this in my mind I concluded that this was hopeless, both because it would be impossible to do in any reasonable space and because the data in existence are not sufficiently accurate and conclusive—and indeed cannot be in our present insecure state where the passage of time can always make such enormous changes in our income status. What I have tried to do is to point these articles at what may be roughly called people of moderate income who are wondering about purchasing houses. I have not undertaken to tell anyone exactly what to do, but rather to furnish the consideration which would enable him to approach his problem and to proceed with it intelligently.

ALBERT MAYER

*Editors' Note:* This is the second of two articles by Mr. Mayer on the problems that need to be taken into consideration in buying a home. The first article, which discussed reasons for home ownership, who can and should buy a home and what sort of house to buy, appeared in *CR Bulletin*, January, 1937. This *Bulletin* is available to anyone, whether subscriber or not, at 30c.

## Contributors

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## Signs and Portents

IT IS PROBABLE that retail advertising departments are taking note of the news which shows the consumer women on the move. The slogan of this movement is that "the women want to know." They do not want to know clumsily, nor concealingly, but more than before they do want to know what they are getting for their money, and whether or no what they want is what they are getting.

It is all very well to sniff at this growing interest on the part of the buying public, and to ignore it on the old contention that women will not take the trouble to dig very deep for the facts. Certainly that is true of information which is boringly, indifferently conveyed—because women are easily bored. But the allegation of feminine factual disinterest is not [made] today in the old sweeping sense. The movement does expand that women want facts, and thus intend to know definitely what they are getting for their cash. Therefore retail advertising departments should watch their news, and shape their minds accordingly, since a change of shopping sentiment seems bound to come in these directions. ("Latest Retail Selling Slants," in *Women's Wear Daily*, January 14, 1937.)

Wide reading of trade journals in the so-called "consumer industries" shows plainly that at last department stores and other retailers are in considerable numbers accepting it as a fact that the consumer's desire for concrete, useful information about the goods she buys is genuine, and no passing whim. All over the country, there are signs that consumers are slowly awakening to the fact that they can have such information if they are persistent and positive enough in their demands. In New York City, for example, the Federation of Women's Clubs is working to secure the labeling of all fabrics as to fiber content and has asked all its members to insist that in the meantime women require the salesclerk to write on the sales check the fiber content of any textiles which they purchase. The editorial quoted seems to hold the view that it will be a wise policy for the retailer to meet and deal fairly with, rather than resist, this trend.

The advertising man's ready answer that any discontent or dissatisfaction on the part of consumers can readily be dealt with by putting on more sales pressure and an enlarged national advertising campaign carries less conviction than formerly.

THE MANAGER OF A BARBERSHOP on Fifty-eighth Street reports that one day last week two of his patrons, technicians in a nearby commercial laboratory, came in and asked him if they might borrow a couple of barbers' coats for the afternoon. "Some advertising men are up there taking pictures of the lab," one of them explained. "They said we had to get some white jackets to wear, because scientists always wear white jackets." ("The Talk of the Town," in the *New Yorker*, January 9, 1937.)

From time to time we have pointed out some of the outstanding differences between real science and scientists and SCIENCE and the SCIENTIST as portrayed in advertisements. The conversation of the two experts as reported in the *New Yorker*, however, puts the whole thing very neatly. It does not, however, give any clue as to why the advertising men bothered to use real scientific workers. Surely anyone in a white jacket would have done just as well.

7.30

Not Confidential—Consumers' Research, Inc.

"LET US TEACH our salespeople to laugh, figuratively speaking, at a customer who wants a shoe that will give her long wear because 'times are still hard and she must economize.' Instead, let us tempt her with beautiful merchandise.

"It will be a revelation to see how women would sooner listen to pleasant and exciting suggestions than hear an echo of dull depression bred remark. Maybe it's our job to teach the customer how to spend again, and to encourage her to spend with spirit, for they are eager to learn again. Let's show our salespeople how to teach them to buy again. Let's make our salespeople feel that we are telling them the truth and that they ought to see the advantage of wholeheartedly getting into the spirit of the thing and 'give them the works,' for the depression is over." ("Give Them the Works" in *Selling* in *Women's Wear Daily*, December 28, 1936.)

Here we have the tall talk of boom times again. Some merchants have not discovered and others apparently never will discover that the depression has taught many consumers to be critical of hoopla salesmanship and to distrust all high-pressure sales tactics.

VIRGINIA USES its outline map in being the first state to provide a quality graded trademark for its tomato industry. The service is available to canners who ask it and pay the required fee. The tomatoes are carefully inspected before and after canning by a representative of the Division of Markets. Grades used, A—fancy, B—extra standard, C—standard, are those established by the U.S. Bureau of Agricultural Economics. (From the "New Business" column in *Business Week*, January 16, 1937.)

We congratulate Virginia on its forward step in providing facilities for grade labeling of tomatoes canned within its borders. If Virginia consumers will make it a point to accept only tomatoes bearing the state grade label (or the federal government's A, B, C, grade label) their discrimination will give further incentive to canners to include the outline map and the gradings on their labels. Consumers in other states should take steps to secure a similar inspection service.

DRUG AND COSMETIC MANUFACTURERS are greatly alarmed over the influx of drastic state food and drug bills which have been introduced into eight state legislatures during the past month. Both the Proprietary Association and Toilet Goods Association have sent out emergency bulletins in an effort to stimulate action against these measures.

The states in which new food, drug and cosmetic control legislation has been introduced are: New York, Washington, Montana, California, Texas, North Dakota, West Virginia, and Connecticut. It is expected momentarily that similar measures will be introduced in other states. ("Drastic Drug Measures Proposed in 8 States," *Drug Trade News*, March 1, 1937.)

We urge all consumers residing in the states mentioned to get in touch with their state legislators. All support possible of every consumer, church, parent-teacher, women's and other club groups should be mustered to help get these state food and drug bills passed. There is no need for consumers to wait for the long-delayed federal action when they have an opportunity to achieve an even better result in their own states.